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THE SCHOOL CAFETERIA—AN OPPORTUNITY FOR DIETITIANS[1]

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CASUAL study of programs of the American Dietetic Association's annual meetings reveals few if any papers which might be expected to stress the importance of proper feeding of school children who must remain at school for the noon meal, either as a curative agency for the malnutrition existent among children of school age, a preventive measure in a public health program, or an important feature of the modern educational program. One or two state meetings, however, scheduled reports of state surveys of school feeding. Similar inspection of programs of national and state meetings of the American Home Economics Association indicates but slight interest in this subject. The JOURNAL of the American Dietetic Association has published only one article dealing with school feeding as such. Articles appear occasionally in the *Journal of the American Home Economics Association.*

The American Dietetic Association has established many excellent courses for training of student dietitians in hospitals, and more recently has undertaken the establishment of approved training in other administrative fields. But we have not as yet secured the establishment of approved courses of apprenticeship for dietitians in school cafeterias—though the opportunities for such work are at least eight times as great numerically as in the hospital field and approximately forty times as many persons may be reached by the work of dietitians in the public schools alone.

This lag in interest on the part of dietitians is understandable since their work lay first with the feeding of the sick. But just as the point of view of the medical group has broadened to include great emphasis on the preventative aspects of modern medicine and the educational aspects of the public health program, so professional groups whose

[1] Presented before the General Session, Annual Meeting of the American Dietetic Association, Boston, October 15, 1936.

membership is made up wholly, or in part, of women trained in nutrition are now developing great interest in a field which offers opportunities for the application of this science to the care of malnourished children, the proper feeding of well children, and the establishment of good habits of food selection as related to health education in the schools.

The problem of malnutrition among school children is not new. Recognizing that children thus physically handicapped were unable to profit to the fullest extent by the educational opportunities of the school, Ellen H. Richards, that phenomenal pioneer, established in Boston in 1894 the first kitchen for public school feeding in the United States, about one hundred years after such feeding was set up in the schools of a number of European countries. Other cities followed in the organization of a food service for similar groups, but in spite of such service the rate of malnutrition among school children remained high as evidenced by department of health reports in cities and counties throughout the United States. In New York City, for example, of approximately 500,000 school children examined annually, 13.5 per cent were reported as suffering from malnutrition in 1927, 13.6 per cent in 1928, and 13.4 per cent in 1929.

These percentages mounted rapidly during the depression years. Alarming figures were reported from certain districts of large cities and from some counties in rural and mining districts, some running as high as 47 per cent. The average for all boroughs of New York City during 1932 averaged 21.1 per cent. An excellent summary of the work of the Children's Bureau, the Federal Relief Administration, and the numerous local agencies to meet this emergency throughout the country, is presented by Dr. Martha Elliot in the *Journal of Pediatrics*, June, 1934. Among other steps, hundreds of thousands of indigent school children were given nourishing lunches. Probably as a result of these programs and of more effective relief administration to families with children of school age, recent reports show a gradual decline in the percentage of malnutrition. New York reports 17.7 per cent for 1934. Warner, Emerson, and Palmer stress the fact that no adequate method for estimating malnutrition has yet been devised and suggest the exercising of care against drawing hasty conclusions from the data now available. Palmer, however, in his most recent paper in *Public Health Reports*, August 16, 1935, on "Height and Weight of Children of the Depression Poor", concludes that the growth and weight of school children from families whose income has fallen to a low level is definitely below that of children in a more fortunate economic group.

The size of the leak in a dam is of less import than that a leak exists which may ultimately wreck the structure. For our purpose here, the discussion as to whether the rate of malnutrition is slightly higher at one time than another is not the most important point. We are concerned that malnutrition exists. The school brings to one place each day, for a period of eleven or twleve years, many children definitely needing good nutritional care. The furnishing of a good nourishing noon meal will not alone solve the problem of malnutrition among them; yet it is extremely difficult to feed children properly without an adequate noon meal. If this can be assured, other health and educational agencies may be able to make greater progress in their efforts toward improving the nutritive status of the children.

In addition to the feeding of the undernourished, special feeding for certain children is required in almost every school. Diets ordered by a physican must be prepared for diabetic, cardiac, nephritic, anemic and tuberculous children. These diets are usually prepared by the dietitian and must be served accurately and unobtrusively by her.

It is not unlikely that indigent children have been better fed at school in recent years than other children in the same schools. They are given simple but complete meals, nutritionally adequate. But the great majority of school children present no special feeding problems and they buy their food. They bring to school their likes and dislikes, their food prejudices—most of which they learn from their parents—their food habits and in many cases, their racial food customs. They need a good lunch but it cannot be forced upon them. They must select it themselves, paying as much as they can afford. The development of good habits of food selection, therefore, becomes the real problem of the dietitian in the school cafeteria.

The devices used for developing these good habits of food selection are many and varied. First among them comes the preparation and service of excellent food. This takes real ability and ingenuity since both food and labor costs must be kept low. Food must be displayed attractively on immaculate counters in pleasing dishes, and served carefully by workers in clean uniforms. Eye-appeal is most effective with children.

Checking of trays by the dietitian or the home economics teacher, or by children in foods classes using colored cards or other signals, is widely practiced in small cafeterias. Charts and posters frequently prepared by student clubs or art classes are effective if used for a short period. Weekly publications of menus in school papers, including daily

specials and regular articles by students and dietitians, serve to keep the children interested in the foods available at lunch and in the nutritional importance of some of them. Coöperation of dietitians and teachers in the correlation of lunchroom practices with subject matter in courses in physiology, home economics and physical education, is a successful method of developing good food habits.

The best device for improving food selection, however, seems to be that of the "plate lunch". On these combination lunches which usually include milk or soup, a hot dish with a vegetable, and a dessert, a price concession is made. For example, a lunch which sells for 10¢ on the combination would cost 15¢ or more if purchased as separate items. Children are bargain hunters and these lunches are rapidly increasing in popularity. They present the best means of furnishing a nourishing and adequate lunch that will train children to like new foods and to appreciate the types of food they need. A recent survey of 190 schools showed that such lunches were served in 80 per cent of the schools at prices of from 10 to 16 cents.

Integration of school feeding with the school health program is essential to the full development of that program. A well trained dietitian or, in rural schools, a supervising nutritionist, deeply concerned in the preventive and educational possibilities of her work, may make vital contributions to such a program. She should be a member of the health council and as such she can assist effectively in the improvement of the health of the children. She has certain very definite indices of the extent to which she is succeeding in her part of the program, that of properly feeding the children. One of these is the health of the children as observed by school physicians and nurses. For example, a recent report of a study made in a rural school in Massachusetts, in which a nutritionist of the State Department of Health helped the one teacher in the school to teach nutrition through the school lunch, shows a definite increase in the consumption of protective foods and a marked improvement in health. The per cent of children with poor nutrition dropped in less than one year from 35 to 10 per cent; those having carious teeth, from 61 to 13 per cent; and defects due to poor posture, from 13 to 0 per cent.

The percentage distribution of purchases among different types of food is another good indication of the kinds of lunches being served to and purchased by the children; a menu is without significance unless these figures are available. Most school lunch menus offer foods from which children may select an adequate lunch, but if, as in 8 of the 190 schools mentioned above, only 6 per cent of the manager's food expenditures

are for milk and 62 per cent are from resale food such as cakes, candies and soft drinks, inquiry into the contributions of the lunch to the health of the children might seem warranted. No figures representative of a very large group of schools are available as guides to safe procedures, though the dietitians who attended a recent meeting of the Conference of Cafeteria Managers are gathering some data. On the basis of previous study, and pending further information, the suggestion has been made that at least 40 per cent of the money spent by the manager for food be spent for milk and ice cream, of which two-thirds should be spent for milk, and that approximately 14 per cent be spent for fruits and vegetables.

This type of distribution will be concomitant only with the sort of procedures suggested above: the service of good food, well served, reasonably priced; and the integration of the teaching program and lunchroom practices. It requires a policy of financial management which emphasizes the health and educational responsibilities of the school lunch since profits will be limited on milk and on most hot foods. It necessitates careful and intelligent menu planning and purchasing, standardization of recipes and portions, and control of stores and sales.

The opportunities in this field of child health and welfare have yet to be developed by dietitians as a professional group, but they present a challenge we may meet in several ways. We can exert our influence through many channels in stressing the importance of well trained managers and the need for nutrition supervisors, primarily concerned with school feeding, who shall be attached to the education or health departments of each state. We can help to develop the growing appreciation of the conviction that the health of school children is a definite responsibility of boards of education and the provisions for proper school feeding are a part of this obligation. We can establish training for qualified graduates equivalent to that now offered in hospitals and other administrative fields. And as dietitians in schools, we can play our part in utilizing this great "educational mechanism of society" for the health and well-being of the school children of our country.

FOOD OF THE ANCIENT AND MODERN STONE AGE MAN[1]

VILHJALMUR STEFANSSON

JUDGING from twentieth century Eskimos of the stone age, our paleolithic ancestors of one or another of the ice ages probably suffered very little from cold.

The human animal is not biologically equipped for the endurance of low temperatures; he can survive only through being shielded from them. This is an important dietetic consideration, for most of the writing and reasoning which I have seen and heard with regard to former stone age and present Arctic diets, goes on the assumption that those diets, so-far as they were suitable at all, were suited to rigorous conditions where much physical energy was required in the struggle for existence, with the burning of much internal fuel to keep the body warm.

But, as we read the evidence, paleolithic man likely used a smaller percentage of his caloric energy to fight the cold of Alaska or Scandinavia during the last ice age than we do now for like reasons in Missouri or France. To grasp this, recall a few well known things.

Going from Mexico towards northern and wooded Canada, or from Sicily to Finland, the amount of caloric energy from food required for a contest with the environment does increase with fair regularity; but at the northern edge of the forest the process is abruptly reversed. For on the Arctic prairies you meet a culture which ceases to fight the environment, submits to it completely, deals with it by adaptation. No caloric energy is needed for a struggle with the cold, because there is no such struggle.

The difference between a Scotsman and an Eskimo dealing with cold is the difference between a human swimmer, who comes up when necessary for air, and a fish, which does not need to come up for air at all. The human swimmer is tense, active, burns a lot of fuel in the struggle for air to breathe; the codfish lets the water cover him and is relaxed under conditions of biological economy.

We take, for an example, the situation among the Eskimos of the Mackenzie and Coronation Gulf before Europeans interfered. "Changing what should be changed," as the scholastic reasoners used to say in Latin, their picture applies to the Northern Polar regions, and, likely enough, applies, at least in considerable part, to our stone and ice age forebears.

[1] Based on address presented at the annual dinner, American Dietetic Association, Boston, October 14, 1936.

The Eskimo culture, and perhaps that of the ice ages, was badly adapted to summer. They endured summer as Australians and Italians endure winter. When continental Eskimos go inland they meet terrific heat, humid temperatures running towards 100°F. in the shade, with the nights almost as hot as the days, the unsetting sun beating upon them. The best they can do for cool garments is to use skin clothes nearly worn out, full of holes. But through every hole the mosquitoes bite. The sand-flies get in and crawl around on their bodies, biting like fleas. The only protection from the insects is smoke, and the insects can stand more smoke than the Eskimos. In old-fashioned language, summer is hell on earth, as long as the wind blows off the land.

But when the summer wind blows off the sea it brings fogs and chill rains. Skin clothes, then, are of little protection. Garments of mammal intestines do shed rain, and so do skins of the seal when properly prepared, but even then they do not approach our water-proofs and umbrellas. The houses of last winter leak, and so no one lives in them. The tents in which people live are skin; they get soggy and rot if the damp weather lasts.

We repeat: With the Eskimo summer and the South Australian winter the condition is one—in both cases you just endure, and pray for the change of season. In South Australia the summer, and in Northern Canada the winter, bring the normal conditions of the year. The Canadian Eskimo has been nearly a prisoner. It is impractical to cross rivers by swimming, and in any case most Eskimos have no idea how to swim. The lakes, which cover more than half the surface of the earth, must be detoured in summer, and even when you think you are making a detour you are perhaps really walking out on a peninsula. The ground is boggy and your feet sink in; the clay is sticky and your boots are clogged with it. The insects make life a burden. You are wretched part of the time because you are wet, and if not wet you swelter with the heat.

All this the frost changes. The insects die or go to sleep; the lakes and rivers freeze over and you can walk across them; the snow arrives and the whole land becomes a sledge road which leads in every direction. Winter clothes and winter houses, which have been developed to meet the normal weather of the year, bring an average of comfort which seems to the stone age Eskimo as pleasant as the average comfort of Park Avenue is to a New Yorker.

In a paper that considers everything from the dietetic point of view, we have not the time to explain fully the Eskimos' clothes, how the

materials are prepared and how the garments are made. Many books, however, including some written by me, have covered this in detail. We simply state, then, that the clothes Eskimos wear in the Arctic during the coldest month of the year, January or February, weigh less than ten pounds, which is less than the winter equipment of the average American business man. These clothes are soft as velvet and it is only a slight exaggeration to say that the wearers have to use a test to find out whether the day is cold. At −40°F., a Mackenzie Eskimo, or a white man dressed in their style, would sit outdoors and chat almost as comfortably as you would in a thermostat-regulated club room. The cold, about which he can read upon the scale of his thermometer, will touch only those parts of his body which are exposed, and they are the face and the inside of the breathing apparatus, a small fraction of the body and needing but little fuel for counterbalance. Warm and completely protected elsewhere, he can sit comfortably even with bare hands. Indeed, the ears, particularly liable to frost, seem to be about the only part of the body likely to freeze if exposed while most of the rest is warm.

This situation is true during calm weather. A strong wind at −20°F. or −30°F. will freeze almost any exposed part of the body if given time. But Eskimo clothes are nearly windproof as well as nearly coldproof, so that, even in a wind, there is little caloric energy needed for counterbalancing a low temperature.

The houses of Mackenzie River, typical in their warmth of the dwellings of most Eskimos, have frames of wood, with a covering of earth so thick that, practically speaking, no chill enters except as planned ventilation. They use a diving-bell principle of control. A house filled with warm air can lose no great amount of it through an opening in the floor, while the cold air below that opening is not able to rise into the house appreciably faster than the warm air escapes at the top. The roof ventilator of a house sheltering twenty or thirty people is likely to be eight or ten inches in diameter. This makes fairly good ventilation, for there may be a temperature difference of from 100° to 150° between indoors and out. With that gradient the house air is so much lighter than the general atmosphere that it rushes out through the ventilator as a forced draft. Air for replacement enters at floor level by a trap with an area of from fifteen to thirty square feet, so that there is no draft appreciable to the inmates.

Through the diving-bell control of ventilation, there are several temperature levels within the house. Lying on the floor you might be reasonably cool at 60°; standing with half your body above the three-

foot level you would be warmish at 70° or 80°; and sitting on the bed platform your shoulders might be in a temperature of 90° or 100°. These temperatures, in the Mackenzie district and in many other places, are produced by lamps which burn animal fat. They burn without odor or smoke, giving a soft, yellowish light.

At Mackenzie there were enough lamps extinguished at bedtime, say 10 o'clock, to bring the room temperature down to 50° or 60°. Both sexes and all ages slept completely naked, under light robes. Next forenoon, with some of the lamps relighted, the temperature would rise to around 70° or 80°, measured five or six feet above the floor. The cooking in the afternoon for the one hot meal of the day would raise the temperature to 90°, 100°, or above. This would gradually sink toward 70° or 80° during the evening, and later to 50° or 60°.

The typical Eskimo house in the afternoon and evening, then, reminds you more of a sweat bath than of a warm room, and naturally you would have to be nearly or quite naked. With clothes made of skin like the Eskimos' (and probably most clothes of our northerly stone age ancestors were), nakedness at such house temperatures is the only thing possible, for with constant perspiration skins would decay so rapidly that, to say nothing of the smell, they would literally fall to pieces in a week or two.

There were, accordingly, before whites interfered, but two Eskimo styles within doors. For these, West Greenland and Northern Alaska (including Mackenzie River) are typical. In Greenland, by the accounts of early travelers, men, women, and children were completely naked within doors. In Northern Alaska, children up to six or seven years of age were naked, but grown people wore breeches, old and full of holes, which covered them from just above the hips to just above the knee. These might get wet during the evening but would not be worn more than a few hours. Whenever they put on regular clothes for outdoors they would hang the breeches up to dry.

The Eskimos were practical enough to realize that drying prevents decay. One person might have, if necessary, two or three pairs of trunks, being careful that at least once every three days each of these would get thoroughly dry.

In the Mackenzie house, then, we used to sit stripped, except for the breeches, from around four in the afternoon, when the outdoor work was done, to around ten or eleven, when it was bedtime. There were streams of perspiration running down our bodies constantly and the children were occupied in carrying around dippers of ice water from which we drank great quantities.

Pausing for dietetic emphasis, we note two important conditions under which we ate our meals that were 100 per cent meat:

(1) While indoors, we were living in a humid tropical environment; when outdoors we carried the tropics around with us inside of our clothes. Neither indoors nor out were we using any considerable part of the caloric value of our food in a biologic struggle against chill.

(2) We drank with our evening meal (four o'clock dinner) some warm broth in which our meat had been boiled. However, by native custom we never alternated bites of food and sips of drink. We might eat a whole meal without a drink, following sometimes with a dipper of warm broth and perhaps a little later taking a good round drink of cold water. At the cold meals, or after them, our drinks were cold.

WHAT WE ATE

Before discussing the diet it is well to remind ourselves that we are likely, if inexperienced in primitive cultures, to misinterpret general statements about food. I might say, correctly, that the chief food of a certain group of Eskimos was caribou meat, with perhaps 30 per cent fish, 10 per cent seal meat, and the remaining 5 or 10 per cent made up of polar bear, rabbits, birds, and eggs. This might lead you to visualize meals where there would be a fish course followed by a meat course, and where we would breakfast at least occasionally on eggs. Such is most unlikely to be the case with primitive peoples. If 50 per cent of the year's food is caribou meat, your primitive eats caribou, likely enough, during approximately half the year, seldom tasting caribou the rest of the twelve months. His fish percentages would come in similarly restricted periods, and fish periods are likely to be fish exclusively. The eggs, far from being breakfasts distributed through the year, would be occasional meals of nothing but eggs during only one month of the year.

The situation varies still more from ours when it comes to vegetables. In the Mackenzie district these were eaten under three conditions:

(1) The chief occasion for vegetables here as with most Eskimos, was a famine. There were several kinds of vegetable things known to be edible and they were resorted to in a definite succession, as prejudices were overborne by the pangs of hunger. (True famines seldom, if ever, occurred in the Mackenzie, but small groups would get short of food through some accident and then famine practice in eating would result).

(2) Some vegetable foods were eaten because the Mackenzie River people liked them. These were chiefly berries; and among berries chiefly the salmon berry or cloudberry (*Rubus chamaemarus Linn.*)

The Mackenzie River people eat these only during the season, but in Western Alaska and elsewhere berries and some other vegetable foods were preserved in oil for winter use—sometimes as delicacies, sometimes to guard against famine, and no doubt frequently with a mixture of both motives.

(3) One form of vegetable dish is eaten strictly in connection with another that is non-vegetable—the moss and other things from a caribou's stomach are used as a base for oil. In my experience the commonest reason for this use was that someone from a distance arrived with a bag of oil that was either in a particularly delectable state (corresponding to Camembert cheese that is just soft enough) or else this was an oil from a favored animal not common in the district, say white whale brought into a sealing community. The question would then arise, how shall we eat this oil? Most likely there would be boiled lean meat, or perhaps wind-dried fish, and then the matter was simple—you cut or broke the lean into suitable pieces, dipping each into the fat. But if no lean happened to be available, or if everybody had just eaten all he wanted, then there was perhaps the suggestion that a caribou had been killed recently, the moss was probably in fair condition, and why not use that to make a salad? Usually the suggestion had an uneven reception, the majority perhaps agreeing and eating the oil that way, while a few just dipped in their fingers and licked them off.

Nobody drinks large swigs of oil, or at least this habit is not known among Eskimos. There are European districts where certain oils are drunk in limited quantities. For instance, Scandinavian fishermen often have a belief in the nearly magical value of cod liver oil, and some of them will toss off, most likely in the morning, the equivalent of between a wine glass and half a teacup. A similar custom I have never seen among Eskimos. The nearest to this was during one famine period when there were six Eskimos with me, five of whom ate oil soaked up with feathers or caribou hair, moss or tea leaves to make a kind of salad. But one member of our party, an aged Eskimo man, took his ration of oil in a teacup and sipped it. The ration was about half a cup, He took longer to sip it than the other Eskimos and I did to eat our salad. He may have required about half an hour.

HANDLING AND PRESERVATION OF FOOD

Taking the whole Eskimo world before whites interfered, probably 99 per cent of the caloric intake of the year was derived from the animal kingdom. In large districts the caloric value of vegetable elements

would have been less than 1/10 or 1 per cent when entire groups were considered, with a yearly zero value for a good many individuals within those groups. There may have been rare groups that derived as much as 5 per cent of their total calories from vegetables. If so, this is most likely to have happened somewhere in Western or Southwestern Alaska.

In those districts where vegetable elements were least used they would be fresh if used at all. You would pick up a berry as you walked along, or the children might gather a mess of them during the afternoon and returning hunters, along with family and visitors, might eat these while meat, the real meal, was being cooked. In districts like Mackenzie River, Coronation Gulf, and many others, *masu* roots (*Polygonum*) were, in early days, used only in a food shortage which occurred during the summer—most likely during the spring. In recent times, contemporaneously with the introduction of the white man's foods, *masu* roots were sometimes eaten in the Mackenzie at the suggestion of immigrants from Western Alaska who were, to some extent, fond of them.

In districts where vegetables may have run from 1 to 5 per cent of the yearly caloric intake, they were eaten fresh during summer and preserved in the winter. Several kinds of berries, as well as *masu* and other roots, were preserved in bags of oil.

Perhaps 90 per cent of the animal food was eaten fresh. There were several kinds of preservation. One of these, freezing, kept the food fresh; the others did not. Quick freezing keeps fish fresh, irrespective of whether it is cleaned or with entrails. Small birds freeze soon enough in cold weather so that they do not taste appreciably strong, even with entrails, and there are no big birds that can be killed in cold weather, unless a rare owl or raven. Seals, too, freeze quickly enough so that they taste fresh. Caribou must have the entrails removed immediately and will then freeze fresh even though the skin remains on. Unskinned grizzly bears taint considerably even with entrails removed, and polar bears may do so slightly. Musk oxen taint seriously unless the hide is removed as well as the entrails. All of this, of course, depends on the rapidity of freezing and varies therefore with the temperature and with the insulating qualities of the coat.

From all these causes together, surely less than 5 per cent of the winter killed food of the pre-white Eskimo became tainted. The freshness of summer foods was quite another thing.

Fish were caught in many districts throughout the summer in larger quantities than could be consumed. There were two methods of preservation:

(1) I saw a typical case of one method during my first year in the North. Fish, ranging from one to three or four pounds in weight, were caught in great numbers. They were immediately slit and the entrails removed. They were then piled in long windrows just back from the sea beach and covered for protection from dogs and wolves with piles of driftwood. If there had been June fishing at this place the fish would be nearly liquid by fall. Late July catches grew so rotten that they fell to pieces readily. The August catch was pretty high, but towards the end of September there was enough frost at night and little enough thaw during the day so that decay ceased.

Decayed fish were not eaten during the warm weather for they are not considered good until frozen. As soon as the freeze-up, they began to be used as delicacies, sometimes as whole meals. The only way of serving decayed fish was to allow them to thaw in the house until as soft as hard ice cream, when they were eaten somewhat as a child would consume an ice cream cone. The taste is similar to that of our strong cheeses. The attitude of the Mackenzie Eskimos towards decayed fish was about that of our fashionable diners towards Camembert or Limburger.

When fish are caught rapidly there is nothing to do but pile them in windrows, as described. But if the catch is slower, the few not eaten are likely to be split and hung up to dry. Commonly, the backbone is removed and used for dog feed, either then or later—indeed, fish bones, no matter what the condition of the fish or the method of eating, are mainly dog feed. (This may be worth emphasizing, for the view is sometimes expressed that the Scotch have good teeth in some communities because they eat fish bones, and we shall be discussing the soundness of Eskimo teeth further on in this paper.)

(2) The wind-drying of fish is seldom carried by Eskimos to the extent that the flesh becomes as hard as in Scandinavian dried fish. Usually an Eskimo dried fish is about as soft as our salted cod. When they get to that dryness they are taken down, piled, and covered from rain by water-shedding skins.

In some districts a good deal of sand gets into fish that are being dried, and thus the teeth of those who eat dried fish are worn down much more rapidly than in other communities. But it seems that no matter how great the wearing of teeth by sand in food, dentine is replaced so rapidly that the teeth never get worn down quite to pulp, producing alveolar abscess.

When caribou or other animals are killed in summer there are again

two methods of preservation. Sometimes the meat, after cooling, is placed in pits below the perpetual frost line, and covered with grass, earth, and sod. Under such conditions there will be a very slow decay. Meat buried in August, chilled through a month or so and then frozen in September or October, will be only slightly tainted—not nearly so much as properly "hung" English venison.

Caribou meat which cannot be eaten at once is somewhat more likely than fish to be wind-dried. The process is the same—you slice the flesh, hang it up, and take it down when the outside has formed a dry skin, with the inside still soft. This partial drying completely prevents the development of the taste or odor of decay. Some pieces that are exceptionally thin become quite hard, but normally the flesh is intended to be only partially dehydrated.

In isolated instances, both fish and caribou were sometimes smoke-dried. Eskimo smoking was never systematic, as with some Indians. It might be, for instance, that if ten caribou were killed the meat of nine would be hung in the open and that of the tenth woud be hung within the tent. But this happened only where the people lived in tepee-shaped camps, and these were rare. The meat of bears and other large animals might be preserved in either of the two ways described for caribou, although drying would be less probable.

Some Eskimo communities, where eggs were plentiful, never used eggs at all—for example, the Mackenzie district where geese nest in thousands. Eskimos who eat eggs eat them fresh, unless as sometimes happens, the eggs have been partly incubated. If there were districts in which eggs were preserved till they became "high," these were on the fringes of the Eskimo world where outside fashions prevailed.

If we compare the whole diet of a strictly carnivorous group of Eskimos solely with the carnivorous portion of our diet, the Eskimo world would on the average eat a higher percentage of raw or rare than we do. But if you compare our whole diet with theirs, remembering that our milk and cream are sometimes raw, our fruit and vegetables frequently raw, our eggs usually soft cooked while Eskimos invariably cook theirs hard, and that our roasts are rarer than theirs though their boiled meat is rarer than ours—if you consider the whole picture, we doubtless use a far higher percentage of uncooked food than did the pre-white Eskimo world.

The Eskimos cooked whenever convenient. If they breakfasted on raw food it was either because the group did not want to waste time in cooking or else because they awoke with too keen an appetite. Pre-

white Eskimo cooking was usually slow, requiring two or three hours. The same would be true for lunch. At dinner time, in the Eskimo way of life, there was ample leisure, and this meal was seldom eaten raw. The fourth meal of the day, just before going to bed, normally consisted of cold boiled food left over from dinner.

While some Eskimos eat a good deal of dried food and others never taste it for years or decades, there are also pronounced variations of diet in other ways. Some groups, for instance, hardly ever have any appreciable amount of food other than fish, while others seldom or never taste fish, living wholly on the flesh of mammals.

COOKING

No frying was ever practiced by the pre-white Eskimos—apparently frying is a rare form of cooking among primitive people everywhere. Roasting was occasionally employed; and then usually by Eskimos who lived in forested districts. Even in forests, boiling is the normal method, while on seacoasts or at sea it is practically the only form of cooking.

Whether food is boiled or roasted, custom ordains that the inside of each piece shall be rare, although usually not so rare as the middle portions of our large roasts of beef.

While space does not permit a full discussion of cooking, we may describe the most common Eskimo meals. They keep meat frozen during six to eight months, for their winter is usually a little more than half the year. Whether mammal or fish, this is cut into chunks of a size varying from that of a lemon to a grapefruit. When the tissue is frozen to glassy hardness there are, of course, a lot of small fragments produced when the food is chopped up.

The pot is three-quarters filled with cracked ice and swung over the lamp. The meat is piled on top of the ice, so that the vessel is heaping. As the ice melts the chunks of meat sink down, and finally the water almost covers the meat. After one or two hours the pot comes to a boil. Usually it is then taken down, or perhaps the flame is reduced to less than enough to continue the boiling. After about ten to twenty more minutes in the hot broth the meat is taken out and put in a wooden trough, where it stands for some time to cool. When the meat is cool enough to handle, the meal begins.

Blood soup may also be made. Some hunters are more careful than others to save blood, and communities also vary a great deal in this respect—some of them hardly ever save blood. If blood is available, a

little of this is used as we might use ice for cooling scalding hot soup. The cracked blood ice is put into the pot immediately after the meat has been taken out of it, and the cook stirs the mixture which (in the Mackenzie at least) was never brought to a second boil. The resulting soup has somewhat the thickness and consistency of our English pea soup.

The meat, then, was eaten lukewarm, the soup drunk lukewarm or colder. The only other drink of the pre-white Eskimos was cold water. When raw flesh was eaten it was sometimes just cold, but more often it was frozen at about the consistency of ice cream. This avoidance of hot food and drink is perhaps worth noting, from the dental point of view, in connection with the rapid deterioration of Eskimo teeth when white foods are adopted. For European meals vary from the native not only chemically but also due to higher temperature.

When the Eskimos take up the white man's way of drinking tea and coffee scalding hot, the taste acquired thereby begins to be applied to all foods. They learn to eat their oatmeal piping hot, their cakes fresh from the griddle, their bread right out of the oven. Some believe that it is this, rather than any essential change in food constituents, that has brought about dental caries in civilized Eskimo communities.

THE CHEWING OF FOOD

There are several obvious reasons why those who never lived with pre-white Eskimos have commonly imagined and frequently stated that they chew a great deal, chiefly coarse food which gives beneficial massage to their gums. It is claimed that this chewing and massage result in the complete absence of dental caries and that comparative absence of pyorrhoea, which is reported by all observers of pre-white Eskimo communities. There are several reasons why most Europeans believe that the whole world chews a lot.

People whose diet is largely cereals and other foods of vegetable nature are accustomed to much chewing. All herbivorous animals chew meticulously. For at least these several decades we have been taught that painstaking mastication is good for us. We are told that the saliva should be mixed thoroughly with the food in the mouth, for digestion begins there (it is only the few who differentiate between starches and other foods on this score). Dentists and others tell us that much chewing will lengthen the life of our teeth and be otherwise conducive to oral health.

Analogizing carelessly to the Eskimos, in our dental reasoning, we begin by assuming that they chew at least as much as we. Then we

impute to them further chewing. We have seen in recent dentifrice advertising, for instance, pictures of charming girls gnawing ham-bones or legs of lamb. Underneath we read: "Terrible, say the social leaders! Splendid, say the dentists!" The argument proceeds that when people ate meat in the way illustrated, they developed and retained excellent teeth through much biting and chewing of tough and coarse food.

Such advertisers have found it convenient to begin by ignoring that man has been a tool-using animal for millions of years. Carnivorous primitives nearly everywhere in the world have a single method of handling meat. Whether it is at the beef feasts of the royalty and warriors of Ethiopia, as reported in the current press, or at the meals of the stone age Eskimos as I saw them at Coronation Gulf in 1910, the method is the same. You take a good-sized piece of meat in your left hand and a knife in the right. With your front teeth you nip lightly into the edge of the piece, just so you get a good hold, and then you cut in front of your lips. This piece of meat is not likely to be larger than the one you cut with knife and fork when you dine politely on a sirloin.

But no matter how tender the steak, a European chews the piece a good deal after putting it in his mouth because he has the chewing habit through being partly herbivorous, and because he has been admonished to chew. The Eskimo has never developed herbivorous mastication; his mother has never told him to chew for the good of his health. So he rolls the piece around in his mouth once or twice and swallows. (He will, of course, chew it efficiently with his molars if it feels as though it would be uncomfortable to swallow).

This description is for cooked meat. Raw meat, when unfrozen, has the feel of a raw oyster in your mouth and you swallow the way you might an oyster—more readily, in fact, for the oyster is likely to be a great deal bigger than the piece of meat you cut off for yourself. Raw fish is, if anything, still more like a raw oyster. Boiled fish is soft and the Eskimo just rolls it in his mouth to get it covered with saliva and slippery.

When you eat raw flesh in winter, whether it is mammal or fish, you nearly always eat it frozen. Animal tissue at anything like $-50°$ is like glass, so that if you drop a fish on a hard floor it splinters to pieces. Flesh at these temperatures resembles cast iron in that when you touch it you freeze fast to it. If you were to give even the daintiest lick to a caribou ham at $-50°$ you would lose a piece of tongue covering approximately the size of the area which came in contact with the ham.

Obviously, we cannot breakfast on this kind of frozen food. We let it remain indoors until it is approximately as soft as hard ice cream or

frozen pudding. We slice the flesh and then cut it in smaller pieces, chewing and eating each piece somewhat as one might chew and eat frozen pudding.

There is, then, only one kind of Eskimo food which gets a deal of chewing—dried flesh. Some districts never have such dried foods at all. In certain districts you might have them one year and not another. There is no district where dessicated food is likely to represent more than 10 or 15 per cent of the diet.

It happens that the districts most likely to dry their flesh foods are the ones which also have an appreciable quantity of vegetables. In Kotzebue Sound, Alaska, for instance, in the early days, you were likely to get at the same meal dried fish and *masu* roots preserved in oil. Both fish and roots would need considerable chewing.

If good oral health is assumed to be due to much chewing and massaging of the gums with rough food, we could expect, first, that Eskimos would have about the poorest teeth in the world, since they chew less than almost any other people, and, second, that their gums would be in serious condition since they are not massaged with coarse food. You would expect, further, that the most tolerable mouth condition would be found among those who eat dried flesh and roots; the most deplorable, among those who eat nothing but boiled or raw fish for years at a time.

Regrettably, here there is a sharp conflict between popular theory and indubitable fact. With caries there appears to be no advantage for the root-eaters over the meat-gulpers—both have 100 per cent absence of caries. Not one cavity has yet been found in any tooth of an Eskimo who died before his food was Europeanized, whether he was a dry meat chewer or a raw meat swallower. We cannot be so definite concerning pyorrhoea, for its traces are not easily legible in skeletons. But at least there is no evidence to show differences in this regard between Eskimo groups that chew most and those that chew least.

Many Eskimos now eat considerable food similar to ours and chew more than formerly, depending upon how closely they follow our dietary habits. Those having most closely followed our diet have the worst teeth, some as bad as ours. There, is then, no racial immunity to caries among Eskimos, nor does mere chewing render immunity.

It has been claimed that primitive Eskimo tooth health, if it does not depend on food chewing, must depend on some other chewing. It is then triumphantly proclaimed that Eskimos chew skins a great deal in preparing them for clothing. This factor is often greatly exaggerated in the telling. Skin chewing is mostly done by the women, and as I have

said elsewhere, it would take us back to a mediaeval type of reasoning if we assumed that a husband's teeth are good because his wife chews. Again, if we thought the son's teeth good because his mother chewed skins we would be adherents of a violent form of the doctrine of the transmission of acquired characters, a currently discredited view.

Any people who eat vegetables, even the softest, or anyone who eats bread or leafy vegetables, is bound to chew a good deal more than the primitive Eskimo average. Yet the Eskimos, or meat eaters comparable to the Eskimos, are the only people ever found in present or former times who can show 100 per cent freedom from caries. There is, accordingly, in the study of such diets and habits of life no aid or comfort for those who believe that the decadent teeth of our civilization are a result of decreased mastication.

It is said and written by dietitians that Eskimos get the necessary calcium by chewing bones. Eskimo skeletons, as studied in our museums, would certainly indicate a plentiful calcium supply, and when first I heard that their calcium was derived from bone chewing the idea impressed me favorably. I had certainly not had any sign of calcium deficiency after ten Arctic years, about half of which were exclusively on meat and the other half on a preponderantly meat diet. And I could remember, thinking back, that I had chewed a great many bones. I worry somewhat now, thinking I may then have given written adherence to the calcium-from-chewed-bones theory, but I take some comfort in that I have not yet been able to discover this in my printed writings. For I realize now a flaw in the argument, serious if not fatal to it.

Certainly caribou eaters chew bones a great deal. If you were to ask them why, they would first say it was because they liked them. On closer analysis we might conclude it was because the bones contain fat. In other words, when we are caribou eaters we chew bones to get a little more fat than we derive from the rest of our meals, and that means really that we are slightly fat hungry. Not infrequently caribou hunters are on the margin of fat starvation, and then they use a lot of bones, either chewing them or boiling for the extraction of fat. Similarly, though perhaps not for quite the same reason, we sometimes eat some bones when we live on fish—not the backbone usually, for that goes to the dogs, but the head bones. For among primitive fishermen heads are as much favored for general eating as they are in New England for chowder.

The trouble with the calcium-from-bones theory comes when we reach the seal eaters. We find when we live exclusively on seals, using

the fat for fuel in cooking and heating as well as for food, that with all our uses, including the feeding of our dogs, there is always a superabundance of fat. As we travel over the sea ice, for instance, we abandon a good deal of fat every now and then.

Moreover, there are striking anatomical differences between caribou and seal bones. Those of the caribou have marrow which we think delicious, and the fat you get from chewing soft ends of rib bones is also of a flavor above the average of the caribou fats. But the long bones of the seal have no marrow in the sense of anything that is a delicacy to carnivorous man. Neither are there soft bone ends that taste good when chewed. However, we need not go far into structure and reasoning but can state simply and flatly that the man who in a caribou year chews a lot of bones, chews no bones at all in a seal year. Personally, I have, however, never gone more than, say, half a year at a time exclusively on seal; and perhaps in my case that span could have been tided over by the calcium I got from herbivorous animals the remaining six months. But there are Eskimos who live practically exclusively on seals, and yet there is no indication while they live that they are less healthy than the caribou eaters. When they die they leave skeletons for our museums which have not yet been reported to show less calcium than those of the caribou eaters.

When Karsten Andersen and I lived a year exclusively on meat, chiefly on beef and mutton, in New York, the supervisors of the experiment were concerned because the analysis of portions of food which were duplicates of those eaten by us showed a startling lack of calcium. Evil results to our health were feared. When we suffered no ill effects through a year it was tentatively assumed that this was because a year is too short a period to bring out the results of living on a food deficient in calcium. It was in this connection that a physical anthropologist, Professor Earnest A. Hooton of Harvard, was requested to examine the Eskimo bones available in the Peabody Museum of that University. He reported that there were no signs of calcium deficiency.

SUMMARY OF OTHER STATEMENTS

In closing, I summarize a few of the points which were developed in a series of articles written by me for *Harper's Magazine* (November and December, 1935; January, 1936.)

We meat eaters of to-day, like carnivorous stone age man, have dogs that share our food with us. On caribou the people get the heads, including tongue and brains, the brisket, ribs, pelvis, and the meat

nearest the bone on the vertebral column. Of internal organs, we get only the hearts and kidneys. The dogs get all the rest of the internal organs; they get hams and tenderloins. It depends on the comparative food requirements of the family and dog team whether dog or man gets the neck and shoulders. The people get the marrow fat and the kidney fat; other fats are divided between people and dogs. The dogs get the bones when there is plenty of fat available; people chew a good many of the soft bone ends in time of fat scarcity and boil the bones for fat.

Among seal eaters the dogs get all internal organs except liver and kidneys. There are no such distinct preferences for certain parts of seal as with caribou, so that we cannot give in detail how these animals are divided between family and dog team. However, with seals the dogs always get all the bones. Caribou eaters pick bones very clean with their knives, but seal eaters leave a good deal of meat on bones. Note the striking difference: among caribou eaters, the livers usually go to the dogs; among seal eaters, they usually go to the family.

By the Eskimo method of handling, practically all the blood of any animal is always in the meat and therefore eaten with the meat. If the animal happens to bleed extensively, through the character of the wound, the blood may or may not be saved for use—usually not if it is a time of plenty.

When you are first put on a meat diet (which in this discussion, you will remember, is a diet from which all elements directly vegetable are absent) you eat square meals for perhaps one to three days. Then gradually your appetite wanes until for two or three days you eat negligible quantities or else do not eat at all. Thereafter your appetite begins to pick up. At the end of two or three weeks you are eating fair meals, without enthusiasm. At the end of two or three months you are eating them with gusto—with pleasurable anticipation, with current enjoyment, and with wholesome after effect. But as long as you do not return to a mixed diet you keep longing for accustomed things. Those you long for, however, are not necessarily from the vegetable kingdom—the things my men most frequently hankered for were salt beef, ham and eggs, wheat cakes with syrup. An Alaska Eskimo, who was with us on one long trip, spoke wistfully of canned salmon and sardines. There have been cases when things like strawberries and cream or oranges were hankered for.

On arrival at a base, from a journey of several months on meat, the novices usually eat themselves sick with the things they have been longing for most. On subsequent trips, no matter how many months

they had been on meat alone, our men never hankered appreciably for civilized foods. Their hunger, when once they had been fully accustomed to meat, was strictly in terms of what they expected to eat—they were meat hungry.

All the ordinary deficiency diseases seem always absent from people living wholly on meat. In view of much discussed theories it is well to specify that certainly there is never a case of scurvy and almost certainly never one of rickets. Tooth decay is absent, pyorrhoea is rare or absent. Teeth when ground down, as by sand in dried meat, seem never to wear wholly down to the pulp so as to result in alveolar abscess.

When we lived in Coronation Gulf, in 1910 and later, with people who had never seen Europeans until they saw us, we found no instance of constipation. There were at least two cases of persistent diarrohea—which we thought possibly connected with ulcer of the digestive tract. In all Eskimo communities constipation always comes soon after the adoption of European foods in marked quantity. Today, with a good many Eskimo groups living chiefly by trading furs for European food, constipation has become frequently more of a problem in the Arctic than it is with us.

Cancer has probably never been reported in Eskimos still living on their native food. The nearest thing known to me was the case of a man at Barrow, Alaska, who died a few years ago after living from 1883 till then on a diet containing considerable amounts of European food. He had been working part of the time for Mr. Charles D. Brower, but would have been living to a considerable extent on European foods in any case, for the diet of his people was altering during the period.

There is no indication that kidney troubles are more prevalent among Eskimos than among us.

It has been said by Diamond Jenness, among others, that the two chief causes of death among primitive Eskimos (he was speaking of Coronation Gulf in 1914–16) are accidents and old age.

Eskimos probably die at an average age somewhat lower than our average. So far as I have been able to analyze the evidence, it would seem probable that this somewhat shorter span of life, if really it exists, is the result of that speeding-up of metabolism which comes from living in such terrific heat indoors as I have described earlier in this paper. They mature so much earlier than we (probably because of the heat) that children are born when mothers are ten years of age. (*See* Stefansson, V.: Temperature Factor in Determining the Age of Maturity Among the Eskimos, *Journal of the American Medical Association*,

September 4, 1920). If women are grandmothers at twenty-one and great-grandmothers at thirty-two, you have a speeding-up of the life cycle which means, in that sense, a premature old age.

The effect upon metabolism of the heat in dwellings is no doubt more pronounced on the women than the men; they stay in the house more. Still, the men cannot be wholly immune from this speeding-up of metabolism (if the women really are, as we think, so affected by it).

. Generalizing, we would say that there is, irrespective of climate or activity of occupation, conclusive evidence of a high degree of average good health when you are on a full meat diet but that the evidence for a lengthened life span is not equally strong. Indeed, we have no evidence favoring lengthened span through meat except for a deduction which may not be correct—that if you are healthy in early and middle life you are likely to have a protracted old age.

The broadest of the reasonably sure conclusions of the study of a meat diet, when collated with the studies of other diets, would be: You can be healthy, and live at least the biblical three-score and ten, on a vegetarian diet, on a meat diet, or on a combination of the two.

HOSPITALS OF YESTERDAY AND TODAY[1]

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FOR those of us who have seen the expanding responsibility of the modern community for social welfare and particularly for public health and the care of the sick, it is impossible to imagine that mankind could have survived without those useful as well as benevolent institutions—the hospitals of today. Only the remarkable toughness of the human animal and his wonderful powers of adaptation have saved the species from utter destruction. Sentimental admirers of the past phases of our historical evolution, who usually derive from novels or visits to remnants of the past ages their pictures of life as it used to be, extol it beyond its true worth. They do not realize how hard and sordid life was until comparatively recent times, not only for the vast masses, but even for the select among the upper classes. There is no better cure for pessimism and despair than an unadorned knowledge of the past of mankind.

Only during the last century has man acquired means of conquering his environment and making it cleanly and sanitary, and only within the last few decades has he actually applied his knowledge on a large scale. To be sure, there were periods during which cleanliness and sanitation reached a high level of efficiency. This is preëminently true of Ancient Rome, but in general the lot of mankind has been a sorry one, as is abundantly recorded in the annals of history. Pestilences of one kind or another, such as the plague, or the "black death," have more than decimated populations in successive recurrences. Such defensive measures as were taken by society were as ineffective as they were crude and cruel. Medical science was in its swaddling clothes and the hospitals were overcrowded asylums for the lame and the halt, the old and the weary, as well as hostelries for the pilgrim. It is impossible for those of us living in the present age of cleanliness and considerateness, of efficient medical and engineering service, to realize the conditions under which the sick were taken care of before the advent of the present era.

In the following sketch I have attempted to trace briefly the story of the hospital, and to indicate by this single evolutionary example how thorny was man's path till science had emancipated him from the more crude phases of his existence.

[1] Presented before the Greater New York Dietetic Association, October 14, 1935. Received for publication November 28, 1936.

It would transgress the limits of this paper if the story were carried backwards to the ancient civilizations of Egypt, of Persia or Babylonia; of Judea, Crete or India, except to say that all of these had some ways of dealing with the sick through institutional organization, and that they employed such means as were at their command to protect themselves against the ravages of disease. In early Greece the physician was an itinerant craftsman who visited the various settlements as other craftsmen did and inquired at each household whether his services might be wanted. Later on, communities began to maintain municipal physicians, who were paid from the proceeds of a particular tax, known as *iatrikon*. The place in which the physician attended the sick was known as *iatreion*. This *iatreion* of the municipal physician became in time, as cities grew in size, the community hospital and the community dispensary.

Early medicine was sacerdotal everywhere, a part of a religious rite, and the institutions for the care of the sick were established in connection with temples. In Greece, the Temples of Aesculapius at Cos, Cnidus, Rhodes and Epidaurus accommodated within their spacious precincts hundreds of sick people at a time. Around these temples were great concourses for games and open air theaters. The patients were treated by religious ministrations of various kinds, some of a questionable moral character, also by psychic diversions, hypnosis, exercise, medications and sunshine bakes and dieting. These temples were combinations of a modern spa, like Vichy, a Lourdes and a Battle Creek Sanitarium. The temples of Aesculapius were built in spots favored by nature—usually on a lofty wooded hill, by the side of a medicinal spring. The sight alone often seemed to impart the hope of a cure. As Dr. Robinson describes the temples:

> All the glories of Greek art were there—lovely Venus and laughing Bacchus, Zeus serene on his golden throne, and Aesculapius sorrowing for the ills of mankind. Fountains played in the shaded groves, and shelter seats were arranged in semi-circles of pure marble. . . . . Hidden music floated over the southern flowers—there was the mingling of rhythm and perfume, fragrance and melody. . . . . Only after he had undergone a course in dietetics and hygiene, did the gates of the temple open for the pilgrim; but that night he lay at the foot of the statue of Aesculapius, awaiting and expecting a cure. The aesculapians went about noiselessly, whispering suggestions, binding a broken limb, or anointing a wounded organ. . . . . Patients who seemed too sick were often not permitted to approach the sacred precincts.

At the beautiful Temple at Cos the father of Hippocrates was a priest, and here Hippocrates is said to have learned the art of medicine. By

that time the aesculapians, or healing priests, became full-fledged physicians, having in their armamentaria not only herbs and drugs, poultices, fomentations, massage and baths, but also instruments for the performance of such surgical operations as trephination.

This was the period of the Golden Age of Greece, and it was a far cry from the days when disease was considered the work of demons and the remedy lay merely in propitiation. To this concept in a somewhat modified form Europe was to return later on and suffer under its blight for almost two thousand years. The downward trend began with the ascendance of Rome, where physicians were treated with contumely. Only foreigners and slaves occupied themselves with healing ministrations. Together with this low esteem of medicine went a very high development of sanitary engineering—wonderful acqueducts, baths and sewage disposal plants. Only with the growth of the enormous estates where thousands of slaves congregated, and with the development of large armies, came the establishment of hospitals, or *valetudinaria*, as they were called in ancient Rome.

The Greek and Roman hospitals are the direct precursors of similar institutions founded in the early centuries of the Christian era. "It is well known that hospitality was a sacred obligation of the ancients, and was practiced by them toward the stranger, the sick, and the needy, with an abundance which doubtless rendered unnecessary much of the institutionalized charity of today. The *xenodochion* (an asylum for strangers or travelers) was a feature of Athens and other cities of Greece and gave its name, as well as its leading outlines, to the later institutions of the Christian fathers."[2]

With the spread of Christianity, hospitals became hospices, or shelters for the accommodation of weary palmers and pilgrims, the poor and the lame, as well as the aged and the sick. Pious and charitable persons like Helena, the British mother of Emperor Constantine, or the famous Roman matrons, Marcella, Paula and Fabiola, whose eulogies were written by St. Jerome, gave large fortunes toward the building and maintenance of hospitals or asylums. In the year 542, King Childebert founded the famous Domus Dei at Lyons, and a century and a half later the Hôtel Dieu of Paris was built. Charlemagne endowed a great number of hospitals in the various parts of his vast domains. The responsibility for the administration of these heavily endowed institutions became a matter of considerable importance to the church, and in time

[2] Nutting, M. A., and Dock, L. L.: A History of Nursing. Vol. 1, p. 70, E. P. Putnam's Sons, New York, 1907.

it was entrusted to the monastic orders almost exclusively. The care of the sick became for a period of many centuries the exclusive prerogatives of the monks and nuns, and lay physicians disappeared almost entirely.

The Crusades led to the establishment of military monastic fraternities, the most important of which was that of the Knights Hospitallers of St. John of Jerusalem. Enormous wealth was lavished on them by all Christendom, from rulers to serfs, and hundreds of hospitals were built by the Knights along the line of communication between the West and the Holy Land.

The spread of leprosy, plague, typhus fever and syphilis led to the establishment of "lazarettos" and to the organization of port hospitals where travelers from infected regions were kept for forty days before being allowed to proceed—hence the source of our modern quarantine.

Hospitals in the Christian world had a multiple origin. One was traditional—hospitals had existed and had to be continued. Then the ancient hospitality of the heathen was strengthened by the application of the parable of the Good Samaritan. Hospitals came to be erected chiefly along the great pilgrimage routes. It was in the spirit of hospitality and of religious duty that the monastic orders were led by the Franciscans to add infirmaries to their convents. This was an extension of the idea of an endowment destined for feeding the poor who had been inscribed on the registry of the churches. The third source for the early hospitals was the desire to segregate lepers; in the Middle Ages the segregation of the lepers was obligatory. Still another motivating force in endowing hospitals by the wealthy of this remote age was the supposed potency of the prayers of the sick on behalf of the dead, to shorten their stay in purgatory. It was customary for the faithful to leave a certain proportion of their worldly goods to ensure continued prayers for the departed benefactor. The name, All Souls College, at Oxford, is a reminder of the time of such endowments. The College derives its name from the duty originally laid upon the beneficiaries of that foundation to pray for the souls of the dead founders.[3]

Throughout the Middle Ages, disease was considered as a punishment for sin. Sin could be expiated by prayer. Consequently, the religious side of the hospital developed at the expense of the scientific. As a result, eventually there were no physicians in the hospitals, and belief in miracles, the power of prayer, fasting, penance, and in the intercession

[3] Evans and Howard: The Romance of the British Voluntary Hospital Movement.

of the Saints, became intensified. A witty English writer observed that "this ability of the Saints to work marvelous cures has created a veritable Harley Street of Heaven," each Saint a specialist in his own line—from Lazarus, who was a sort of general practitioner, to Bartholomew, who was particularly powerful in curing leprosy. St. Erasmus specialized in colic; St. Just, in headache; St. Lawrence, in pains in the back; St. Anthony, in erysipelas; St. Catherine of Alexandria, in diseases of the tongue; St. Apolonia, in toothache; St. Clara and St. Lucia, in afflictions of the eye, and so on.

During the Middle Ages, there was not only a standstill, but a recession in medical progress. Fortunately, the heritage of Greek medicine fell to the Arabs who established hospitals and medical schools at Bagdad, Damascus, Alexandria and other cities. They carried their culture with them when they settled in Spain, and toward the close of the eighth century their hospitals and the school of medicine at Cordova became renowned. Thither came many students from various parts of Europe. In time, the writings of the Arabian scholars were translated into Latin and thus the teachings of Aristotle, Hippocrates, Galen and others, in modified form, found their way back into Europe and created a great intellectual stir.

Montpellier, Salerno and Bologna developed the outstanding medical faculties of the thirteenth century. The teaching, however, was preeminently didactic, with very little, if any, clinical instruction, and little opportunity for dissection of the human cadaver. The hospitals continued to be under the direction of the monks, although the Lateran Council of 1123 forbade monks and priests to practice medicine, and particularly surgery, with which agonizing pain and appalling mortality were associated. Pope Innocent III even issued an anathema against the practice of surgery in 1215. The same Pope, however, encouraged the building of hospitals modeled after the famous Hospital of Santo Spirito at Montpellier, and under his inspiration hundreds of hospitals dedicated to the Holy Spirit were built throughout Europe.

With the Reformation, when the property of the monasteries was confiscated by the Protestant monarchs, the *spytals* or hospitals were closed, to the very great distress of the homeless and the crippled who had found an asylum in these institutions in the past. As in many other domains of life of the period, the hospitals became rife with corruption. Mr. A. M. Taylor of the London Hospital has recently published an account of some abuses of mediaeval charity. The founder of a hospital could bequeath patronage to his heirs and this engendered many diffi-

culties and often resulted in exploitation of the endowment and neglect of the inmates; usually, however, this control was vested in a monastery cathedral chapter, fraternity or municipality, sometimes in a trade guild. Quarrels over patronage were frequent and resulted in long-drawn out litigation, particularly between church and crown. Since hospitals came under the same religious category as monasteries, they were put under episcopal control at the Parliament of Leicester, the royal hospitals being exempted. Neither the diocesan bishops nor the crown chancellor could visit the hospitals regularly, hence his duties were assigned to visitors who had a right to "maintenance" for themselves and their retainers. Patrons could place their aged servants in hospitals for the remainder of their lives. The office of hospital warden was sometimes held with other ecclesiastical offices and misappropriation of hospital funds was common. The seizure of land or of cattle, chalices and ornaments by the wardens was not a rare occurrence. All kinds of deception were practiced and the privations of the inmates can well be imagined.

This state of decadence was the principal reason for the closing of the hospitals by Henry VIII. Modern historical research indicates that the action of Henry VIII was not motivated by wilful destruction of useful charitable institutions, but was a needed major surgical operation which, however, carried in its train for many years a great deal of undoubted suffering. As a result, England was practically without hospitals for about two centuries. That Henry VIII was not antagonistic to hospitals *per se*, is evidenced by the fact that the first English military hospitals were inaugurated during his reign, and that at the instance of the Lord Mayor of London, Thomas Gresham, the two famous ancient English hospitals, St. Bartholomew's and St. Thomas', received new charters from him.

A new impetus for the reorganization and modernization of hospitals as well as of prisons in Great Britain, came as a result of the momentous and fruitful activity of John Howard, who visited the prisons and hospitals, not only of the United Kingdom, but of the whole Continent, and whose account of the lazarettos, prisons and hospitals constitutes the most comprehensive description we possess of hospital conditions in Europe toward the end of the eighteenth century. From Howard's account, we learn that the hospitals of Italy and Spain at the time were on the whole satisfactory; but the condition of many other hospitals, such as the Hôtel Dieu in Lyons, was repellent. He describes his visit to this hospital in the winter of 1785–86 and speaks of the rooms as "nasty and offensive; and two patients in many of the beds, but not one

window open; the medical gentlemen here, and also the charitable sisters, being prejudiced against a free circulation of air, as well as against keeping rooms clean by washing them." On his frequent visits to the Royal Infirmary of Edinburgh, he "could not but observe the want of a dietary in the wards, and that the patients are prohibited the use of those convenient baths that are in this hospital."

Those who are familiar with the *modus vivendi* of preceding centuries cannot be shocked when they read the descriptions of the care and arrangements that existed in hospitals during all this long period, down and well into the nineteenth century. One bed for several patients was the common custom and principles of hygiene of even the most primitive type were unknown. Two French writers, Lavastine and Molinery, in their little book on French medicine, point out that the barbarism of the past centuries culminated in especially unfavorable hygienic conditions in the hospitals of the time; they speak of the terrible overcrowding of the Hôtel Dieu in Paris, yet they infer that it was kept clean since 1300 brooms were used annually! The cubic space per patient was most inadequate and it is on this score, so these writers say, that the hospital deserved its reputation for unhealthiness.

Those who have read Dr. Zinsser's fascinating *Rats, Lice and History* must have gained some knowledge of conditions as they existed until recently throughout the world, and which were responsible for the succession of devastating blights, such as typhus fever. Dr. Zinsser writes: The manner of living throughout the Middle Ages made general lousiness inevitable. In England, in the twelfth and thirteenth centuries, the houses of the poor were mere hovels, often with only a hole in the roof to let out the smoke of the central fire; and in cold weather the families were huddled together at night without changing the simple garments—usually a shift—which they wore in the daytime. Washing was practically out of the question, and the better classes, not very much more comfortable in their badly heated domiciles, wore a great many clothes, which they rarely changed. MacArthur's story of Thomas à Becket's funeral illustrates this:

> The Archbishop was murdered in Canterbury Cathedral on the evening of the 29th of December. The body lay in the Cathedral all night, and was prepared for burial on the following day. The Archbishop was dressed in an extraordinary collection of clothes. He had a large brown mantle; under it, a white surplice; below that, a lamb's wool coat; then another woolen coat; and a third woolen coat below this; under this, there was the black, cowled robe of the Benedictine Order; under this, a shirt; and next to the body a curious haircloth, covered with

linen. As the body grew cold, the vermin that were living in this multiple covering started to crawl out, and, as MacArthur quotes the chronicler: "The vermin boiled over like water in a simmering cauldron, and the onlookers burst into alternate weeping and laughter."

Dr. Zinsser illustrates further the ubiquity and the acceptance of the louse by an another account: Lice have even been important in politics. Cowan tells the story of the custom prevailing in Hurdenburg in Sweden, where in the Middle Ages a mayor was elected in the following manner. The persons eligible sat around a table with their heads bowed forward, allowing their beards to rest on the table. A louse was then put in the middle of the table. The one into whose beard the louse first adventured was the mayor for the ensuing year.

Those who have read Briffault's *Europa* may remember the descriptions of life in royal castles of England and France, including Louis XIV's Versailles. Even at the loftiest peaks, human existence was far from being attractive. What then could be expected of the hospitals?

I have strayed somewhat from my subject. In coming back to it let us remember that during the Middle Ages science received an overpowering setback, and hospitals suffered from stagnation in medical thought and practice. It was not until the eighteenth century that the first harbingers of reform became visible. I have mentioned John Howard. I ought also to say that the French Academy of Sciences was the first great scientific body to take cognizance of the need for reform in hospitals, and the recommendations its committee made in 1778 dominated hospital planning for over a century and ushered in the pavilion type of hospital. The real reform had not, however, taken place until the advent of that singularly gifted, and grandly noble woman, Florence Nightingale. The great American physician and signer of the Declaration of Independence, Benjamin Rush, had this to say about the hospitals: "Hospitals are the sinks of human life in an army. They robbed the United States of more citizens than the sword. Humanity, economy and philosophy, all concur in giving a preference to the conveniences and wholesome air of private houses, and should war continue to be the absurd and unchristian mode of deciding national disputes, it is to be hoped that the progress of science will so far mitigate one of its greatest calamities, as to produce an abolition of hospitals for acute disease."

It is incredible to us who know the hospitals of today, that as recently as 1863 a distinguished practitioner of Albany, Dr. Charles Alfred Lee, was moved to write about the existing state of hospital affairs in the United States in the following scathing terms:

> It may be truly said that hospitals are in some measure the criteria of a nation's progress in civilization, and the measure of its cultivation of those charities which spring from the heart of a people imbued with philanthropic sentiments. And yet no institutions have been so abused and mismanaged as public hospitals. Originating in the purest benevolence, and supported with the most commendable liberality, they have not only in a great measure failed in accomplishing the objects in view, viz., the recovery of the largest number of sick men in the shortest possible time, but they have even aggravated the very evils they were designated to remove. The laws of sanitary science, imperfectly understood, it is true, until comparatively modern times, have been, for the most part, disregarded and ignored by those who have had these institutions especially in charge, until at length it became a serious question whether it would not prove a blessing to mankind if they were not abolished altogether.

About conditions as they existed at Bellevue Hospital, New York, in the early seventies, Dr. W. Gill Wylie, later one of the foremost apostles of newly evolving concepts of hospital responsibility, had this to say:

> At that time, with rare exceptions, the nurses were ignorant and in some cases worthless characters, who accepted the impossible task of attending to and nursing from 20 to 30 patients each. There were no night nurses; the night watchmen—three in number to a hospital of 800 beds—were expected to give assistance to patients requiring attention during the night. The hospital building, originally an old prison and almshouse erected 60 years ago, had been added to, and was a massive stone structure with three stories and a basement. The wards were only separated from each other by the intervening partitions inclosing the water closets and bathrooms, which were without ventilation, except as they opened into the wards. . . . The sanitary condition of the hospital was shocking. . . . I saw, while on duty in the wards, patients die from septic diseases contracted in the wards, after the slightest surgical operations or injuries. From 40 to 60 per cent of all amputations of limbs proved fatal.

It is perhaps not generally realized that 50 per cent of hospital beds in the United States are for the mentally sick. Considering what is now being done for this ever-growing legion of victims of our tempo and mode of life, it is hard to believe how cruel humanity's attitude was toward the insane. This can best be illustrated by the history of Bethlehem Hospital in London, known for short as "bedlam." It became a "lunatic asylum" in the days of Sir Thomas More. Most of the patients cared for in the "bedlam" were without clothing, chained to the walls by an arm, neck or leg; five or more in the same room, without shoes or stockings, generally in semi-darkness, for the peculiar theory seemed to be held that lunatics could feel neither heat nor cold. In spite of the revolting and agonizing sight these must have presented, "bedlam" was

one of the fashionable sights of London, whither the grand folk and the vulgar rabble could go on payment of the small sum of one penny admission fee, which went towards the revenues of the hospital, and gave them the right to tease the unfortunate inmates.

Now in view of all of this, it is remarkable what has been achieved in the last thirty-five years. To those of us who have been born into the conditions of the present day, it is impossible to realize the enormous strides and the rate of progress that have been made, unless we contrast them with the hospitals of yesterday and earlier days. We are sometimes apt to be impatient with conditions which we think ought to be ameliorated, and we are perfectly right to give vent to well considered proposals for further improvement, but it seems to me that we have no right in this age to despair of anything. See the recognition accorded asepsis and the boon it has been to humanity. Look at the spaciousness, cleanliness, stateliness and the efficiency of our hospitals, and the improvement in nursing. Look at the extent to which social service has been introduced, and the place scientific dietetics has been accorded, and you will marvel at and admire the spirit of the medical profession, which has inspired all this remarkable change and aroused the community to the realization of its need.

The distinguishing feature of the evolution of English and American hospitals is the fact that on the whole they have been maintained on a voluntary, rather than on a tax-rate basis. The benevolence of innumerable men and women who have given fortunes to the building and maintenance of hospitals was an expression of their sympathy for the impecunious sick, and also a protection from political interference in the domain of the care of the sick, and a stimulus to medical research, medical endeavor and medical education. The heritage of this fine spirit of benevolence and concern for social welfare is the most precious jewel of our civilization, which must be guarded against the forces of destruction.

WHERE ADMINISTRATORS COME FROM[1]

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THE importance of scientific management as a part of the teaching of what is known as institution management or institution economics in our accredited colleges and universities cannot be too deeply stressed. Any dietitian who progresses far in her profession, outside of pure research, has to depend in great measure upon her administrative ability. There is a saying and certainly a current belief that administrators are born, not made. However true the implications of this, nevertheless it is equally true that knowledge of the principles of scientific management, successfully applied, will enable the college graduate who lacks this innate administrative ability to approach and even frequently attain qualities of real leadership.

NEED FOR ADMINISTRATIVE STUDENT DIETITIAN TRAINING

In four years of college preparation leading to a bachelor's degree with a major in foods and nutrition or institution management, one can acquire but little more than the theory of scientific management. This is true even for those colleges fortunate in having access to field work centers away from the college campus which provide limited experience in the application of scientific management theory to actual work situations in a competitive industry. Educators and home economics college students are more and more accepting a fifth year of carefully controlled training in a hospital nutrition department as essential to the student's future success as a hospital dietitian. Yet there are many who believe that graduates are adequately equipped to go out into competitive commercial positions without a fifth year of administrative student dietitian training.

A knowledge of scientific management is as basically essential for a dietitian as is the knowledge of nutrition. Because of this, any college student who possesses inherent administrative ability should be encouraged to spend a fifth year putting into actual practice those theories regarding management learned in college. The more promising she appears to be in college, the more she needs the tests and the opportunity for personal growth that such a year of rigid self-discipline and self-development will bring.

[1] Presented before the General Session, Annual Meeting of the American Dietetic Association, Boston, October 14, 1936.

Recent research carried on by the Western Electric Company in a Chicago plant, as evaluated and interpreted by Professor Whitehead, Harvard University, shows that it is the degree of success with the personal equation that is the determining factor in volume quality production and net profit, even though all the many other factors involved in the application of the tenets of scientific management to the particular industry have been met. The working surfaces may be the right height, machines and tools of the best and properly adjusted, lights adequate, flow of materials uninterrupted, but if the personalities of the groups clash and personnel management is weak, volume will immediately fall off and quality of the finished product suffer.

How much experience has the young college graduate had with successful personnel relationship? How many tests has she successfully weathered in adapting herself to, and working with, difficult personalities? Johnson O'Connor of the Stevens Institute of Technology, as a result of his observations of successful executives to determine those qualities essential to leadership, is convinced that the first job represents the crucial test. Therefore, if a fifth year of student work will start the young administrator on the right path, this year is well worth both the time and money involved. Executive positions in industry command high salaries because there are so few capable of assuming the responsibilities.

Some industrial executives so thoroughly believe in the need of training understudies for executive positions that they provide special facilities for such training. The American Dietetic Association, in meeting the ever increasing demand for administrators in commercial and educational food production units, is developing administrative student dietitian courses in carefully selected centers. The institutions in these centers are equipped with educational objectives, physical plant, staff and personnel to provide standards of experience and training equal to that offered in the approved courses designed for hospital dietitians. The school cafeteria, the college residence or dining hall, the private school dormitory, the club, the college commons, the restaurant and the hotel all offer stimulating opportunities for the college graduate equipped with the tools of the dietitian; namely, knowledge of foods and nutrition, and scientific management.

The University of Washington places so much importance on a fifth year of training that with the beginning of 1937 no graduate who has majored in institution management will be recommended for an institution position until she has taken student dietitian training.

ADMINISTRATIVE STUDENT DIETITIAN COURSE OBJECTIVES

The objectives of an administrative student dietitian course are threefold: (1) the discovery and development of latent executive talent; (2) personal growth of the student through rigid discipline, along with further opportunity to acquire social poise, charm, and the personal attributes so essential to leadership—stamina, courage, honesty, personal integrity and dependability; and (3) the acquirement of accurate and actual knowledge through experience and personal application. These objectives can be reached only when the amount of outside study, combined with practical experience, is so balanced as to give the student the greatest insight into administrative and daily operating problems.

POLICIES AND ORGANIZATION FOR AN ADMINISTRATIVE STUDENT DIETITIAN COURSE

The writer's recommendations regarding the policies and organization for an administrative student dietitian course are based upon the experience and understanding acquired in conducting a hospital student dietitian course and the administrative student dietitian course of the Women's Educational and Industrial Union. Experience in meeting problems of inspection of courses approved by the American Dietetic Association (learned as president of the Association) proved of inestimable value in continuing to promote the growth of the Union's course in line with national professional standards and the well established objectives of the approved hospital courses. The Union's course has been available for college graduates with a major in foods and nutrition and subsequently a major in institution management since 1907. The American Dietetic Association, organized in 1918, has officially encouraged hospital courses since 1925 and approved these since 1927. Administrative (non-hospital) courses have had the national Association's approval since 1931, and the Union's course was the first to be so approved. This gives us an appreciation of the educational progressiveness and the professional standards promoted by this pioneer women's organization, incorporated under the laws of Massachusetts in 1887 to promote the social, educational and industrial advancement of women. The seniority of the administrative course at the Union and its records of placement of its graduates, gives us a yardstick by which to estimate the present need for, as well as the probable future of non-hospital administrative student dietitian courses. The following recommendations are made with all these factors in mind.

(1) The institution offering the student training course should provide a range of experience, as wide as possible, in its own departments, supplemented by outside affiliations if necessary. In general, the student should have a selection of opportunities for practical experience in kitchens, dining rooms, food shops, food production centers, financial and purchasing departments.

(2) A director of administrative student training should have full responsibility for the selection and training of the students. The centering of responsibility for all educational work and student training in the Vocational Training Department at the Union is one of the points of real strength in its administrative student dietitian course. This is true since in competitive food positions the main responsibility of department heads is to operate at a profit. With this as a major objective, the college graduate's need for training and experience can frequently be lost sight of in the midst of the demands and emergencies of everyday operation.

The director of training should have the active coöperation of all department heads and should act as adviser to students in all matters of conduct, course outline and so on. She should see that all department heads are aware of the importance of giving students experience in the departments. The purpose in the majority of cases must be to provide training, regardless of the immediate productive result of the student's efforts. It is highly desirable to have the stipends for the students centralized in an educational or general overhead fund charged to the department of training—not to the departments in which the students are assigned to work. This plan relieves the various department heads from the responsibility for seeing that each student earns her way in the department, and prevents student exploitation. Whenever the nature of the work permits, the student should be given jobs involving some responsibility. This, more than anything else, will develop self-confidence and initiative.

(3) The attitude of the heads of the departments in which students work must be entirely in sympathy with administrative training. They should manifest this in active coöperation, by assuming responsibility for the quality of the experience provided students in their departments, and by setting a good example in their methods of dealing with people.

(4) The number of students to be trained at one time will depend on the number of departments and opportunities within departments. In no instance should the number of students be so great that the normal functioning of any department depends to an appreciable extent on the work of the students rather than on the work of the department's permanent personnel. Eight or nine students appear to be about the maximum number that a reasonably large institution can train satisfactorily.

(5) If industrial training courses for executives can be taken as a guide, an adequate course would cover a period of a year. Too much training may give the dietitian a perpetual student attitude in her work. Too little training may prevent the student's obtaining experience in assuming responsibilities which will give her an awareness of her potentialities.

(6) An institution of sufficient size to establish an administrative student dietitian training course will usually have openings from time to time for dietitians. A definite policy of selecting graduates from the student course to fill

positions within the organization and a policy of advancing those who qualify will act as a strong incentive to the students.

SELECTION OF STUDENTS

The director of training must decide on the kind of qualifications which make for success in each type of administrative food position and for which the year's intensive training will fit the graduates. These qualifications can serve as a guide in making the award of competitive appointments to the course as well as in placing each graduate. Only those college graduates having real administrative promise, the requisite technical preparation, and the personality essential for leadership should be awarded appointments. Only seven competitive appointments are available for the Union course. It has been the policy during the past five years not to make any award unless the applicant meets the requirements, following which only the seven most promising are selected. One year only three applicants qualified, and only during 1935–36 were all the group graduated.

We feel that the first and foremost qualification for students is innate administrative ability; the second is a sound technical foundation that meets the semester hour distribution of subject matter required for admission to the American Dietetic Association approved administrative student dietitian courses, with particular emphasis on the social and biological sciences and institution management; the third is character, personal appearance and dynamic personality that are known to be coördinating assets of all true executives; the fourth is manual dexterity, unusual foods skill and refinement of sensibilities with a keen sense of taste, smell and color appreciation; the fifth is adequate liberal arts foundation, especially English, art and design, and general personal refinement and culture; the sixth is a real liking for people; the seventh is a consuming interest in the work, coupled with superior physical health, a sense of humor and creative imagination.

CONDUCTING THE COURSE

The conducting of the course depends on so many different factors which vary with the type of institution that the comments which follow are intended as a guide only. It may also be noted that any program not sufficiently flexible to adapt itself to the kind of college training each student has had and to the aptitudes she may show, will not prove satisfactory.

Work schedules for all students should be prepared at the beginning

of the course, allotting definite periods of time in the various departments in which the student is to work. Our students are scheduled in the departments for periods of 2 weeks to 4 months. Each student is allowed to select the department in which she will take her major for a 3 to 4 month period. Her scheduled time in other departments varies from 2 to 6 weeks and is arranged to supplement most advantageously the training received in the major department. We feel that it is a mistake to allow a student to remain in any one department for a period longer than 4 months.

Study should form an important part of the student's work but should take the form of reports and projects, rather than class work. Reports should be presented orally by the student at group discussions. The development of individual and group projects carried along for either 6,

The Women's Educational and Industrial Union administrative student dietitians' expenditures for 1935–1936

BUDGET ITEMS	AVERAGE SPENT BY 6 STUDENTS	LOWEST EXPENDITURE FOR EACH ITEM	HIGHEST EXPENDITURE FOR EACH ITEM
Personal expense	44.29	20.14	80.40
Food*	64.38	21.31	136.95
Shelter	246.46	215.00	267.15
Clothing expense	130.89	67.79	184.59
Miscellaneous	155.06	87.02	226.49
Professional expense	35.32	20.45	43.69
Total of all items	676.40		

* On days Union is closed.

10 or 12 months of the year (depending upon the nature of the project) is essential to provide the students with accurate factual data and serves as a test of the student's qualities of leadership, coöperation, and ability to work with her equals.

The booklet, "Take Before Eating", prepared as a souvenir of the 1936 Boston meeting for the members of the American Dietetic Association by the 1935–36 group of administrative student dietitians, was the direct outcome of the students' weekly "restaurant shoppers" assignments organized as a group project to test their salesmanship ability, knowledge of customer psychology, keenness of foods appreciation, management, and ability for graphic, editorial presentation of subject matter. Another group project at the Union has been the establishing of a budget for expenditures incurred by each student, including an

accurate record of actual expenses. Students who have graduated from the course say that our insistence upon their keeping a budget has instilled habits of thrift which are proving of value.

We feel that we have a real responsibility to give each prospective student dietitian an accurate picture of all probable expenses for this year of intensive post graduate training. We believe that the results of the group project of actual expenditures made by each student in the outgoing group, when set up as a suggested budget for the incoming student, is the most accurate and up-to-date method of meeting our responsibility in this respect.

Group student conferences should be held every week for the purpose of discussing problems arising from the student's work in the various departments and for presenting the oral reports prepared by the students as a part of their study work. The conferences should be in the form of discussions and each student should be required to act as conference leader at various times. Members of the executive staff should be present at conferences to encourage discussion by the students and to furnish constructive suggestions with a view toward stimulating the students' interest.

Our weekly group conferences point conclusively to the need of limiting the group to 7 or 8 students and 2 or 3 executives in order to give each student suitable opportunity to express herself. Very small groups tend to create too much informality and make it difficult to build up a desirable group morale. Too large groups tend to throw the burden of discussion upon a few students, leaving the remainder as an audience.

We have been conducting our group conferences in connection with a tea at which the students take turns serving as hostesses. These teas are unusually helpful in developing social poise, confidence, and refinement of food standards in the students. Occasionally the students invite groups of department heads, members of the Massachusetts Dietetic Association and other outside groups to their teas and these events are always highlights in the course.

Personal conferences should be held with each student at least once a month and preferably every three weeks throughout the year. At this time she should be commended for work particularly well done, shown how to avoid making the same mistakes twice and helped with her personal adjustments. The importance of these conferences to the personal growth of the student cannot be too highly stressed

Machinery should be set up in the office of the director of training for assembling data on all likely student prospects and for evaluating this

data in preparation for a conference with department heads before recommending appointment. The director of training should work directly with heads of the schools of home economics so that the students in each succeeding senior class, best fitted for administrative food work, will apply for appointment to the type of graduate course for which they are best fitted by nature and aptitude.

The director of training should call a conference of all department heads three months after the start of the course to discuss the work done by the various students and to classify them into four groups as follows: (a) those whose work is satisfactory; (b) those whose work is not satisfactory but may improve with training and stimulation; (c) those ready for dismissal or suggested transfer to another line of work; and (d) those who are likely to leave voluntarily.

While it is desirable to have the entire year's course a probationary period, there should be a strict follow-up at the end of the first four months. At this time groups "c" and "d" as noted above should receive final disposition. Under no condition should they be permitted to continue beyond that point. Additional conferences with the department heads can be held as the need develops.

As the end of the training period approaches the director of training should weigh the prospects of each student as a potential administrator with growing clarity and fairness based upon: (1) aptitude tests; (2) conduct at group conferences; (3) reports from department heads; (4) number and quality of suggestions offered; (5) personal conferences; (6) ability to act upon constructive criticism; (7) success in carrying major executive responsibility during the last two months of vacation relief assignments; (8) ability to express herself clearly and convincingly in discussion, both on her feet and when seated, as well as in written projects; and (9) quality of reports produced during the year.

PLACEMENT OF STUDENTS AFTER GRADUATION

The institution offering a course in administrative student dietitian training will usually have openings for some of its graduates and should take an active interest in placing the remainder with other organizations. In the past, a number of schools of home economics have considered a student "placed" following graduation if she received appointment to an approved student dietitian course. This seems justifiable on the basis that the director in charge of the student training course feels responsible for placing all who satisfactorily complete the year's training. The director of student training is in a strategic position to place these

graduates, with insight; and the American Dietetic Association should encourage a sense of responsibility for student dietitian placement on the part of directors of training.

During the first decade of the Union's development of its course, applicants were accepted from liberal arts colleges as well as from colleges of home economics. Since then, students have been required to have a major in foods and nutrition and in recent years in institution management as well. The records of positions held and the range of salaries earned by all the graduates are a stimulating challenge for ever increased efforts in quality of experience and training offered. The 1935–36 survey of the present professional status of these former graduates, averaging in number from 3 to 8 a year, offers interesting data. The types of positions held by graduates are as follows: in school, Y. W. C. A., industrial and chain store cafeterias; in hotel, department store, private and chain restaurants and as owners of restaurants; in country club, private club and college club food service; as directors of catering service; in college and private dormitory work; in utility home services; government home services; food manufacturing research; and as teachers of home economics.

The tabulation of the survey listing the type of positions successfully held with successively higher salaries by the Union's graduates illustrates both the practicability and the scope of training received. Pamphlets prepared by The Institute for Research, 537 South Dearborn Street, Chicago, serve to emphasize the professional future of positions of this type.

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A COMPARISON OF THE VALUES OBTAINED BY CALCULATION AND BY ANALYSIS FOR THE IRON CONTENT OF 85 MIXED DIETS[1]

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THE use of tables of average percentage composition for calculating the mineral content of dietaries is open to question in view of the recent advances in analytical methods and the recognition of the significance of variations in the mineral content of foods. Evidence of this can be obtained whenever a comparison is made of values for the mineral content of a dietary gained by calculation and by analysis. This paper offers such a comparison for the iron content of a group of diets.

The data represent a portion of those collected in a study of the iron metabolism of four young women during consecutive menstrual cycles and reported by Leverton and Roberts (1). The diets were planned to be adequate in the dietary essentials and offered a generous variety of foods. A single foundation dietary was used for every subject during every five-day period; in addition to this, certain foods (white bread, butter, apples, candy, cookies) chosen because of their low mineral content were permitted *ad libitum*.

The figures for the iron content of the diets for 85 five-day periods for the four subjects were obtained as follows: A composite of one-tenth of all the food eaten by each subject for each consecutive five-day period was made and analyzed for iron by the thiocyanate-amyl-alcohol method. The figures so obtained will be referred to as the "determined" values for iron. From the records of the daily food intakes, using Table 61 "Ash Constituents of Foods in Percentage of the Edible Portion" in Sherman's *Chemistry of Food and Nutrition*, (2) the iron content of each five-day diet was calculated. The results will be referred to as the "calculated" values for iron. It was decided to use Sherman's figures because they are the ones most generally used, and represent the most complete single published compilation for the mineral content of foods. For a few food such as mayonnaise, cookies, and candy, not listed in Table 61, figures from Bradley's *Tables of Food Values* (3) were used.

The percentage differences between the calculated and determined

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values for the average daily intake of iron by each subject for each period are computed according to the formula

$$\frac{\text{Difference between calculated and determined}}{\text{Average of calculated and determined}} \times 100$$

This report is a summary of the differences for all the subjects for the entire time of the study, rather than a consideration of differences in individual cases.

The most striking result of the comparison between the calculated and determined figures for the iron content of the mixed diets is that in 81 of the 85 cases the calculated values are less than those obtained by laboratory analysis. These negative differences range from 0.20 to 44.3

TABLE 1

Size of percentage differences in 81 comparisons where calculated values were lower than determined values by subjects

SUBJECT	TOTAL COMPARISONS	NEGATIVE DIFFERENCE IN PER CENT			
		0–10%	10–20%	20–30%	30–45%
		(*Number of cases in each group*)			
A	22	8	9	3	2
B	18	10	5	3	0
C	26	11	9	4	2
D	15	4	4	3	4
Total cases.....	81				
Per cent of total cases.....		40.7	33.3	16.0	9.9

per cent, with an average of 13.7 per cent for the 81 comparisons. For the individual subjects the calculated values averaged 15.3, 11.7, 13.8, and 19.5 per cent less than the determined values for A, B, C, and D, respectively. When the individual comparisons are examined (Table 1), it is seen that 40.7 per cent of the differences are no greater than 10 per cent. The remaining differences, however, are of significant size. One-third are 10 to 20 per cent, and one-fourth are 20 to 45 per cent below the determined values. In only four comparisons are the calculated values above the determined ones and here the differences range from 0.81 to 3.76 per cent. All four of these occur in the diets of Subject A.

When a comparison is made of the percentage differences between the calculated and the determined iron content of the diets for every period

for each subject, a general parallelism is evident in the trend of the values for the different subjects from period to period. In other words, the percentage differences for the various subjects all tend to increase or all to decrease from the preceding period.

The standard deviation and coefficient of variation of the calculated iron figures for each subject for the entire time of the study were less than those of the figures from analysis. The standard deviations of the calculated values were 0.70, 0.58, 0.75, and 0.92, as compared with 1.20, 1.24, 1.30, and 1.65 for the determined values for Subjects A, B, C, and D. Similarly, the coefficients of variation were 6.63, 5.46, 8.63, and 9.61 for the calculated and 10.06, 10.47, 12.96, and 14.09 for the determined values.

DISCUSSION

Discussion of these results with particular reference to the source of the additional iron found when the food composites were analyzed, rather than when their iron content was calculated, requires a consideration of the methods both in the preparation of the food and the analysis of the food composites.

Every attempt was made to secure food of uniform composition during the entire five months of the study. Wherever possible canned foods were used and the supply bought in case lots. The foundation dietary for each five-day period included the following canned foods: tomato juice, tomato soup, peaches, pineapple, string beans, beets, peas, and sweet potatoes. No water was added to the vegetables when they were heated; the liquid already present evaporated somewhat during the heating process and the vegetables were then served, using a perforated spoon. Since the plan of the balance study was to approximate an ordinary situation with regard to food preparation and consumption, no attempt was made to protect the food from contamination with iron before it was served. Enamel and aluminum utensils were used for cooking and although distilled water was used instead of tap water it was only because the subjects drank different amounts and the tap water was known to vary in its mineral content. However, as soon as the food was served to the subjects a portion was placed in a covered glass jar and then every precaution was taken to keep this sample from collecting additional iron from the air, utensils, or containers. This portion was used for making the daily food composites.

Data obtained while standardizing the procedures for making the food composites show that the iron content of composites made at the same

time by the same experienced worker differed by 1.3 per cent. A critical study made to evaluate the thiocyanate-amyl-alcohol method for the determination of iron in biological materials showed that under the condition finally established for the analytical work in this laboratory, and with the same person doing all the analyses, the average recovery of iron was 100.7 per cent. Triplicate determinations made on each of three ash solutions of the same original food composite could be expected to check with 0.9 per cent if the diet was low in fat and within 1.9 per cent if the diet was high in fat. Moreover, the variation for the diets of the different subjects are parallel even though the composites were treated and analyzed in no definite sequence. Contamination during analysis as a possible explanation of the increased iron content is therefore excluded. In view of these results it seems justifiable to consider the differences between the determined and calculated values for the iron content of the dietaries as real and significant and not as laboratory artifacts or caprices of technique.

The variations as reflected by the standard deviations and coefficients of variation were greater for the determined values than for the calculated ones. This should be the case since the purpose of analysis of composites of every diet is to record the fluctuations in iron intakes, whether due to the gross quantity of food eaten or more especially to variations in the iron content of the same food from one period to the next.

Reasons for these results not confirming previous reports in the literature can be suggested. Rose *et al.* (4) and Leichsenring and Flor (5) found only 70 per cent of the calculated amounts of iron in their dietaries; however, they controlled all contamination during preparation. Ohlson and Daum (6) found that the determined values of three of their fourteen diets were equal to or above the calculated values, while the other eleven averaged 9 per cent below the calculated values. Although they used tap water and ordinary kitchenware they do not mention the use of any canned foods. Also the method of analysis was different and the percentage recovery of iron in food was not reported, though in feces it ranged from 94.8 to 102.4 and in urine from 92.0 to 102.4. In the study reported here an attempt was made to simulate home conditions of food selection and preparation, and canned foods were used extensively. These factors would tend to give higher values for the iron content of the diets than if the study had been made under strict laboratory conditions. For these reasons the results are probably representative of the difference in the iron value of a diet when calculated and when prepared and eaten in the home.

SUMMARY AND CONCLUSIONS

The iron content of 85 five-day dietaries was calculated from figures given in Sherman's *Chemistry of Food and Nutrition* and compared with the values obtained by actual analysis of composites of these dietaries. For 81 of the 85 dietaries studied the calculated values were found to be less than the determined values. For 41 per cent of the comparisons this negative difference was no greater than 10 per cent, but the remaining differences were of significant size. One-third were 10 to 20 per cent, and one-fourth 20 to 45 per cent below the determined values. Variations in the iron content of food at different times, the liberal use of canned foods, and the practice of taking the samples of foods for analysis at the time of serving the meal after they had been prepared in the usual kitchen utensils, are believed to account for this difference.

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EDITORIAL

Richmond in October

It will be apple picking time when the American Dietetic Association's delegates arrive in Virginia, and the laden apple trees of the lovely valley of the Shenandoah will be hanging low with luscious, dark red fruit. Just south of Richmond the tobacco farmers will be up before dawn to load their mule-drawn carts with the first of the new tobacco crop for the busy auction floors. Peanut threshers will be working sixteen hours a day to harvest the vast fields of goobers, soon to be re-harvested for lost nuts by droves of razorbacks—presaging Smithfield hams for Christmas.

Along the Blue Ridge the haze of autumn will be dim and beautiful in the warm sunshine, for October is almost a summer month in Virginia. There will have been just enough frost to bring forth the beauty of the autumn foliage—the reds of dogwood and sumac, yellow poplars, and the green of pine and cedar. In Virginia, Nature paints her masterpiece in autumn, and lingers at the work for six weeks or more.

Virginia, and the nation, began at Jamestown, where on May 13, 1607 the first English settlers in America established the first permanent settlement. Today the mighty James River has made the peninsula a tiny island, covered with tumbled ruins of ancient fortifications, an old church, a quaint burying ground and monuments to those who led the van. Six miles away is Williamsburg, Virginia's capitol from 1699 through the Revolution. A few years ago John D. Rockefeller, Jr., established an organization to reclaim its 150 remaining structures of the colonial period, to remove those erected since and to reërect the historic structures that time had erased. Today, Williamsburg stands much as it did in the days when Thomas Jefferson, George Washington, James Madison, George Mason, James Monroe and a host of other famous figures of the Revolution came to confer with Virginia's royal governor or to sit with the first free legislative body in America in its stately capitol.

Only thirteen miles away is Yorktown, where Cornwallis surrendered to Washington and his allies in 1781. In the old town are many structures that have stood undisturbed through the centuries. Many of them were built in the year that Williamsburg became the capitol. West of Williamsburg is the city laid out in 1731 by Colonel William Byrd and selected by Thomas Jefferson to be capitol of the new and free Virginia. Along the James River are the vast plantations of Colonial days, whose

beautiful old homes survive, surrounded by lovely gardens and stately lawns.

Jefferson designed Virginia's capitol, in which is the only existing full length statue posed by George Washington. Surrounding Richmond is a battle-field park preserving fortifications which resisted all efforts of Union armies until the city was evacuated. South of Richmond is Petersburg, surrounded by a park commemorating the longest siege operations in the history of the nation. Nearby are Manassas (Bull Run) and Fredericksburg. West, lies the vast, rolling Piedmont Plateau, extending to the foothills of the Blue Ridge and dotted with historic old estates—the homes of Jefferson and Monroe, James Madison, Merriweather Lewis, and William and George Rogers Clark. Nestling in the foothills of the Blue Ridge is the University of Virginia, designed by Jefferson and said to be one of the most beautiful in the world.

Every visitor to Virginia should travel the length of Shenandoah National Park on the beautiful Skyline Drive. It will be particularly attractive in autumn, with its lovely vistas of the Piedmont and the Shenandoah Valley. Old in history and cherished tradition and rich in natural beauty, Virginia has an atmosphere and charm peculiarly her own.

Distribution of the Students' Food Dollar as Spent by 23 Colleges and Universities in 31 Dormitories and Cafeterias

The Second National Conference on College Hygiene which met in Washington, D. C., December 28–31, 1936, was sponsored by the American Student Health Association, the President's Committee of Fifty on College Hygiene, and the National Health Council. The Conference had five major sections: (I) Health Service, (II) Health Teaching, (III) Organization and Correlation, (IV) Special Problems, and (V) Relationship of College Hygiene to Teacher Training and Secondary Education.

In Section IV, one of the special problems was the nutrition of the college student. Among those contributing to the work of the Nutrition Committee was a group which undertook to study the distribution of the student's food dollar in dormitory dining halls and cafeterias. The committee, all of Austin, Texas, and under the chairmanship of Rosalie Godfrey, business director of Residence Halls, consisted of the following: Selma Streit, business manager, Scottish Rite Dormitory; Beulah Smith; May Brookshier, resident director, Jessie Andrews Dormitory and the

Woman's Building, University of Texas; Jet Winters, professor of nutrition, University of Texas; and Anna Janzen, director, University Cafeteria, University of Texas.

Questionnaires were sent to trained directors of dormitory dining halls and college cafeterias to obtain from them data on the percentage distribution of money spent for food; in this way the committee hoped to derive a standard for the distribution of the student's food dollar. Without time to make a more detailed study, the most that could be done was to summarize the data gathered, and lay a foundation for future work on this subject.

Thirty-three institution managers located in various sections of the United States were invited to answer questionnaires and follow up letters; of these, 23, or approximately three-fourths, furnished the data requested. Of the remaining 10, 4 failed to answer; 2 were unable to compile data in time because the questionnaires were misdirected and received too late; 3 regretted that the methods of keeping books in their institutions made coöperation impossible; and one was on leave. Owing to the shortness of time it was impossible to communicate with everyone whose experience would have been valuable in this report.

Questionnaires were sent as follows: Universities—California (Presbyterian Hospital Dormitory), Columbia, Harvard, Illinois, Michigan (Mother-Jordan Hall), Nebraska, Syracuse, Stanford, Texas (three, including one to Woman's Building, one to Littlefield Dormitory), Washington, Wisconsin and Yale; Colleges—Ames Agricultural (Coöperative Houses), Briar Cliff Junior, Connecticut (for Women), Florida State (for Women), Kansas State, Michigan State, North Carolina (for Women), Oregon State, Randolph-Macon Women's, San José State Teachers, Sara Lawrence, Simmons, Smith, Texas State (for Women), Texas Technological, Vassar, and Washington State; Dormitories—Scottish Rite (Austin, Texas); and Miss Ruth Lusby.

The questionnaire called for the actual amount of money spent for foods in each of six classes: (1) fruits and vegetables, including canned, fresh and dried; (2) meats, fish, poultry and eggs; (3) milk, cream, cheese and ice cream; (4) butter, salad oils and cooking fats; (5) cereals, sugars, and sweets, including all breakfast cereals, flour, bread, macaroni, spaghetti, preserves, jams, jellies, candies and syrup; (6) miscellaneous, including pickles, olives, tea, coffee, cocoa, chocolate, salt, spices, flavorings, nuts, gelatine, etc. The percentage spent for each group was also requested.

Since the material was sent to the committee in confidence, each dormi-

tory or college cafeteria was given a number in lieu of a name. Numbers 1–5 are located in the Eastern section of the United States; numbers

TABLE 1

Percentage distribution of money for different food groups according to institutions

		1	2	3	4	5	6
NO.	TYPE	FRUITS AND VEGE-TABLES	MEAT FISH EGGS POULTRY	MILK CREAM CHEESE	BUTTER SALAD OILS COOKING FATS	CEREALS SUGARS SWEETS	MISC.
1	Dormitory	23.5	38.8	16.5	10.0	7.1	4.2
2	Dormitories	23.8	34.8	19.0	9.6	9.2	3.5
3	Commons	24.0	24.0	21.1	10.6	15.6	4.3
4	Dormitories	25.0	37.0	22.0	8.0	4.0	4.0
5	Coöperative dormitory	32.0	25.0	24.0		8.0	
6	Dormitory	25.0	32.0	16.0	14.0	9.0	4.0
7	Dormitories	25.7	35.6	18.6			
8	Dormitory and union	18.4	37.8	23.2	10.1	7.1	2.6
9	Dormitory	27.4	32.5	14.4	12.0	8.9	4.7
10	Dormitory	27.3	31.7	14.5	11.6	9.8	5.2
11	Dormitory	25.1	29.6	16.3	11.8	12.1	5.0
12	Commons (women)	26.0	21.3	21.1	12.1	13.1	6 2
13	Dormitory	31.4	25.4	19.1	14.0	2.2	5.1
14	Dormitory	24.5	32.5	13.5	10.2	14.4	4.2
15	Coöperative dormitory	31.5	23.5	17.3	11.5	13.5	2.7
16	Coöperative dormitory (men)	24.6	23.0	19.7	10.9	19.4	2.4
17	Coöperative dormitory	29.2	24.2	17.8	11.7	12.8	4.3
18	Commons	25.5	26.5	23.3	9.2	11.6	3.9
19	Dormitory	27.7	27.5	17.3	10.1	13.9	3.5
20	Dormitory	27.6	25.8	17.4	5.5	16.3	6.8
21	Dormitory (men)	21.1	23.6	24.1	5.2	20.8	4.6
22	Cafeteria (women)	23.8	25.5	17.1	7.6	11.0	15.1
23	Dormitory	25.2	25.4	17.7	11.6	7.4	12.8
24	Dormitory	23.8	26.5	16.7	8.4	14.9	9.9
25	Dormitory	30.9	29.1	14.2	13.2	8.1	4.3
26	Dormitory	28.4	31.9	17.4	8.0	9.3	4.9
27	Dormitory	30.3	28.0	16.7	10.8	8.9	4.9
28	Commons	27.8	34.5	16.4	6.9	12.0	2.4
29	Commons	25.5	27.8	19.4	11.3	9.3	6.7
30	Cafeteria	30.0	25.7	16.3	8.4	16.3	3.7
31	Dormitory	31.1	24.9	18.1	11.6	11.3	3.0
Average		26.5	28.8	18.3	10.0	11.0	5.0

6–7 in the Southern; numbers 8–13 in the Northern; numbers 14–19 in the Middle Western; numbers 20–28 in the Southwestern; and numbers 29–31 in the Western.

It seemed best to report the material tabulated by groups. The

per cent of the total expenditures spent for the various groups seemed more significant than the total amount spent. The median and the average per cent in each group were determined, but as they were so close together there seemed no need for differentiation, and the average only is reported. The returns are shown as percentages in table 1.

The experience of the institutions as a whole is perhaps best represented by averages, weighted by the amounts expended. Table 2 shows the total amount for each group spent by the institutions studied and the weighted averages.

Since two-thirds of the institutions spent within a range of 5 per cent for 5 out of the 6 groups, and since the average, median, and weighted

TABLE 2

Total amount for each group spent according to institutions studied and weighted averages

GROUP	AMOUNT SPENT	WEIGHTED AVERAGE
Group 1. Fruits and vegetables	$311,550.41	25.5%
Group 2. Meat, fish, eggs, and poultry	404,624 95	32.3%
Group 3. Dairy products and ice cream	240,375.45	19.8%
Group 4. Butter, salad oils, and cooking fats	108,953.23	9.0%
Group 5. Cereals, sugars, and sweets	106,019.16	8.8%
Group 6. Miscellaneous	55,012.58	4.6%
Total food expenditures	$1,226,535.78	100.0%

average percentages all lie within these ranges, the ranges are considered indicative and are as follows: 24–29 per cent for Group 1; 14–19 per cent for Group 3; 9–14 per cent for Group 4; 7–12 per cent for Group 5; and 2–7 per cent for Group 6. There is no indicative percentage for Group 2 as no great number of institutions tend to fall within a 5 per cent range of each other. Until further work has been done on food budgets, an indicative percentage for this group cannot be established.

Accurate studies including income and food budgets, number of persons served and their sex, prevailing unit prices, the aim and type of institutions, and the adequacy of the food served from a nutritional standpoint, should be made in a larger number of institutions before a standard for the adequate distribution of the students' food dollar can be established.

CURRENT COMMENT

President's Message

On another page of this JOURNAL you will read something of the beauties of Virginia in the fall and of the historical landmarks that you may see at the time of the annual meeting. I visited the Virginia State Dietetic Association in Roanoke, April 16–17, and the following week went on to the Tri-State Assembly in Raleigh, North Carolina. These interesting and enjoyable meetings and the enthusiasm of the southern members for the coming national meeting at Richmond are significant—and the program promises to be one of the best we have ever had.

The old Virginia mansions, some of which have been lived in continually since colonial days, will be of particular interest. The kitchens with their huge fireplaces and equipment for cooking over open fires will give a contrasting picture of life in another day. Members of the state association are arranging visits to some of the most famous places within a possible radius, and our hostesses will see that we are introduced to typical southern foods.

Other official visits by members of the Executive Committee have been made by the president-elect, Lenna F. Cooper, who addressed the Maryland Dietetic Association at Baltimore and the Missouri Dietetic Association at Kansas City. The treasurer, Sarah Elkin, was an official representative and speaker at the Iowa Dietetic Association's annual meeting and that of the Minnesota Dietetic Association in Rochester.

It was both a pleasure and a privilege to attend the meeting of the Canadian Dietetic Association, convening in Montreal, May 27–29. The progress made in the short space of two years demonstrates the professional interest of this sister organization. Over 200 of the 392 members, some of whom came from sections as distant as British Columbia and Alberta, attended the Montreal meeting. Every province was represented and a well planned program, covering subjects concerning the hospital, university and commercial fields and that of social welfare, was presented. On behalf of the American Dietetic Association, I extended to the Canadian Dietetic Association our greetings and best wishes and a most cordial invitation to attend our annual meeting next October.—LUTE TROUTT, *President, American Dietetic Association.*

Nutrition in Palestine

As early as 1919 when infant mortality was at its height, largely due to improper feeding, the Women's International Zionist Organization

established an Infant Welfare Center in Palestine, where special attention was given to prenatal care and milk distributed to babies. Today nutritional advice benefits 20,000 children annually—children brought to centers, undernourished children in schools, sickly or premature babies, and children cared for by trained nurses throughout the country. An intensive program in teaching nutrition to children is carried out in the schools by the Hadassah Medical Organization. Children cook their own meals and nutritional projects center around this most practical form of application.

The Domestic Science School was the first institution in Palestine to teach the value of a balanced diet and to train teachers in extension work. Before this school was in existence, however, one of the first tasks of the organization, in 1920, was to feed the workmen. The kitchen in operation at that time, a most primitive one, was the center from which food was distributed to workmen in different quarters of the new Tel-Aviv. For years the main meal had consisted of meat soup, meat balls, and compote, seven days a week. Gradually the hostel for girls, which began by distributing food to immigrants, introduced domestic science. Today every aspect of scientific housekeeping and nutrition is taught in the new school. In 1931 the school opened a public restaurant to train the graduates in large quantity cookery, and this first low cost restaurant in Tel-Aviv gave great impetus to other restaurants. In 1933 some of the graduates conducted it on a coöperative basis and it is still successful today.

If diets are influenced by what is grown, the reverse is also true that teaching proper diet can change the agriculture of the country. The enterprising group of women who started the Palestine Federation of the organization during the crisis of 1927 decided that it was better to grow vegetables than to stand in a bread line. A garden for every home was the object, and within a short time they were accomplishing their threefold purpose of economizing, providing healthful and suitable food, and beautifying the city. The garden movement spread from the city to the village and communal centers, where gardening and cooking teachers were sent simultaneously to teach not only what to cook but how to grow it. It is estimated at the present time that one-seventh of all the vegetable gardens in the country are supervised by the WIZO and most of the women in agriculture have been trained by the same organization. These results show to what extent the market products and the diet of the country have been directly influenced.

The cooking instruction was accomplished in the face of great diffi-

culty. Women had come to Palestine determined to shake off women's fetters, to build up Palestine. Kitchen work was officially known as "the black work" and was in disfavor. Crates of empty tins gave evidence of their attitude. The instructors' first work was to teach them that an adequate diet for human beings was at least as important as feeding cows and chickens rationally. Emphasis was placed on the value of vegetables and shortly thereafter can-opener cookery was replaced by cookery of home grown products.

The problem remains, however, to establish permanent kitchen help since a high standard cannot be maintained when untrained people are constantly replacing those who have been trained. Seminaries of instruction for kitchen help have been established at the Domestic Science School in Nachlat-lzhak attended by representatives of all Palestine groups. A regular three month course in foods and nutrition has been established in different settlements, and is followed by a course in special diets for the sick at the school. When the students return to their own community the instructor visits and helps them to apply what they have learned. Gradually the whole problem of nutrition in the settlement is being raised to a higher level. Much has been accomplished in planning adequate meals on the low cost budget of 35 to 40 mils per day (17–20 cents per day, per person). Courses are arranged for the immigrant wife who is perplexed by the new foods. As many as 25 domestic science courses are given yearly all over Palestine.

Haphazard, inadequate eating habits have given way to a knowledge of nutrition and the hundreds of young women trained by the organization are influencing the food habits of the country in private homes, restaurants, hospitals and community centers.—LILLIAN COMFELD, *Women's International Zionist Organization, Tel-Aviv.*

WEST COAST FOOD FADS AND FANCIES

The diet fad is rampant on the West coast. "Health markets", commercial dietaries and the so-called natural food stores are as common as the ordinary food market in the East.

Although each company advises a different line of food products, they all agree that "natural foods" *must* be used: raw sugar instead of refined; lemon juice instead of vinegar; olive or peanut oil in place of other fats; substitutes for tea, coffee, and condiments.

The importance of minerals is over-stressed. One store illustrates the body's use of the various minerals by a diagram of the body, with arrows pointing to the parts affected by the use or lack of minerals. The

use of a given mineral assures a perfect complexion; another, a perfect figure, and so on.

One company, stating that it is almost impossible to eat sufficient fruits and vegetables to provide the body with the essential salts, offers the public a commercial preparation in the form of raw juices in bottles. These juices are advised for specific complaints. For instance: celery juice is indicated in the treatment of indigestion and rheumatism; carrot juice for the complexion; parsley juice as a building tonic; cabbage juice for the kidneys; while radish and lemon juices, combined, are recommended for the gall bladder. There is on sale a device that extracts these juices from the various vegetables. Another gadget reduces the vegetables to a fine pulp which one is advised to eat since ordinary mastication does not break the food into particles small enough to permit absorption of the minerals!

A third company advises against the use of milk, except for infants, because of its "mucous-forming" characteristic. As a substitute, they offer a combination of phosphorus and calcium, in powder form, to be taken every morning. In conjunction, another product, potassium, is to be taken every evening. After three or four months these powders are discontinued *until signs of calcium deficiency appear*, when the use of the powders should be resumed. I was told by the "nutritionist" in charge that calcium deficiency is easily recognizable by signs of tooth decay and finger nail ridges.

In addition to corrective diets, in which diets for constipation seem most popular, the health stores offer diets for weight reduction or increase, and for maintenance of proper weight. Any of these diets may be had with the purchase of one or more of their products.

Some of the products are exorbitantly high. One store, offering a complete assortment of all the "pure foods", sells a whole grain cereal at sixty cents a pound, meatless broth at one dollar per small bottle and, at similarly exorbitant prices, one may purchase pure honey, brown sugar, fruit and pure sugar candies, peanut and olive oil, and garlic in sweet-coated tablet form.

The printed advertising material circulated includes articles concerning "amazing" scientific food facts and health advice often written by so-called "doctors" and by dietitians who lack the qualifying credentials to permit their use of the title. But the public is happily unaware of the wool over its eyes and seems willing and eager to pay the exorbitant prices and to follow faithfully any and all advice and instruction offered, provided it is sufficiently fantastic and hopeful.—BERNICE SIMMONS, *1012 North Ardmore Avenue, Hollywood.*

Report of the Nominating Committee, American Dietetic Association

The five members of the nominating committee: Martha Alderman, Florence Bateson, Lillian Storms, Elizabeth Tuft and the chairman, elected at the last annual meeting in October, began work in November in order that all local and state associations should have the opportunity of selecting the nominees for the next year's slate. The first procedure was to send letters to the presidents of both affiliated and non-affiliated states, of local associations and to members who had served or were serving on the executive committee. They were asked to consider the following points:

1. There should be a fair rotation of presidential nominees representing each of the four sections' interests.
2. The president-elect should be someone having recently served on the executive committee.
3. The secretary, as chairman of the membership committee, preferably should have served in some capacity on the executive committee, or as a member of the membership committee, or have had experience in evaluating transcripts.
4. Transaction of business is expedited if the treasurer resides in Chicago or within a radius of not more than 24 hours' distance by mail.
5. The personnel of the nominating committee should be representative of all sections of the country.
6. There are points in favor of the secretary and treasurer serving the full period they are eligible to hold office. It is disadvantageous when both offices are filled with new incumbents during the same year.
7. The final slate should represent a wide distribution of members. To insure this, opposing candidates for the same office may at times be selected from identical sections.

The following is the analysis of the returns received: 31 affiliated states, 19; 4 non-affiliated states, 1; 39 local associations, 12; 25 key members, 9; executive committee, 3. An analysis of these returns was made by the chairman of the nominating committee and sent to the members of the committee, from which the committee made their selections according to the number of votes received by each candidate, excepting in cases where there were ties.

The individual returns from the committee were then summarized and sent to the members of the nominating committee from which the final slate, with one nominee for president-elect, two for the other offices, and eight for the nominating committee, was made up. The nominee for president-elect and all those for the nominating committee accepted. One candidate for each of the other offices accepted; the second refused.

A letter was then sent to members of the executive committee and to the nominating committee asking, if under the circumstances, a single slate should be used for all offices. All but one member of the executive committee replied in the affirmative. Three members of the nominating committee replied in the affirmative and two in the negative.

A summary of these returns was then sent to the same group and the decision was made to present a single slate for the offices. The members of the nominating committee will, however, be elected as formerly. In making a choice among these candidates, members will be placing the responsibility for the selection of nominees for the next year. If the same procedure is followed, the nominating committee will merely analyze the returns from the membership as it did last year and candidates will be chosen according to the number of votes which they receive, excepting in cases where there are ties.

The slate for 1937–38 follows: president-elect, Anna M. Tracy, Florida State College for Women, Tallahassee; vice-president, Beula B. Marble, Huntington Memorial Hospital, Boston; secretary, Ruth Kahn, Washington University Clinic, St. Louis; treasurer, Sarah Elkin, Michael Reese Hospital, Chicago. Nominating committee: Mary Louise Bone, Starling Loving Hospital, Columbus, Ohio; Aileen Brown, Medical College of Virginia, Richmond; Laura Comstock, Eastman Kodak Company, Rochester, New York; Maniza Moore, Beth Israel Hospital, Boston; Margaret A. Ohlson, Iowa State College, Ames, Iowa; Fairfax T. Proudfit, University of Tennessee, Memphis; Margaret Ritchie, Battle Creek College, Battle Creek, Mich.; Helen E. Walsh, Los Angeles County Relief Administration, Los Angeles.

Although every state and local association had the opportunity to express the wishes of the local membership in regard to the choice of candidates, it will be noted that only about fifty per cent took advantage of the opportunity.—EDITH M. BARBER, *Chairman.*

BOOK REVIEWS

Clinical Allergy: Manifestations, Diagnosis and Treatment. By Albert H. Rowe, M.S., M.D. Philadelphia: Lea and Febiger, 1937, pp. 812. Price $8.50.

This book covers the entire field of clinical allergy due to foods, inhalants, contactants, fungi, bacteria and other causes. While every recognized and many hypothetical causes of hypersensitiveness are considered, particular attention is devoted to food and the many inhalant, contact and drug allergies. Dr. Rowe evaluates the part that bacterial, hormonal, physical and autogenous tissue allergies play in the production of symptoms. He includes revised material appearing in his previous work, *Food Allergy*, published in 1931. Elimination diets, first introduced by Dr. Rowe, have been revised and extended, and detailed menus for adults and children are listed.

Included are elimination diets modified for the diabetic and for reducing purposes as well as previously unpublished recipes for use in these various diets. Throughout the book, practical methods of diagnosis and treatment have been emphasized. While noting the use of the leukopenic index in his chapter on diagnosis, Dr. Rowe appears to feel that diagnostic problems of food allergy can be solved as rapidly with diet trial, aided if desired by diet diary, as with leukopenic indices.

Much that is of very recent knowledge is included: new conceptions of tissue changes in allergy; the fact that no tissue of the body is exempt from allergy and that all physicians and specialists should be alert to the allergic symptoms which their patients may develop; the advance in knowledge of dermatoses arising from allergy; allergy as a cause of migraine and of idiopathic epilepsy; and ocular allergies.

Other desirable features are nearly 80 pages of bibliography; a useful index of allergens and excitants; food diary, skin reaction, symptom, and history forms; a questionnaire for the patient; and 83 case histories. This is an invaluable book for the dietitian who wishes to be informed on the problem of allergies, so intimately concerned with foods and feeding.

Vitamins in Theory and Practice. By L. J. Harris. Second Edition. New York: The Macmillan Company, 1937. Cambridge: At the University Press, pp. 242. Price $3.00.

In this book Dr. Harris, director of the Nutritional Laboratory of Cambridge, England, and one of the leading experimenters in vitamin theory, explains in most entertaining and simple fashion how the various vitamins were discovered, and how they work in the human system.

The early call for a second edition and the intense interest and rapid progress in research work on vitamins has given the author an opportunity to record the many significant advances since the first edition appeared in December 1935. Among these advances are: the chemical characterization of vitamin B_1; the isolation of vitamin E; and the recognition that vitamin B_2 is a complex consisting of at least three factors. As in the first edition, the author most admirably presents a wealth of factual scientific information clothed in readable, graphic phrases. The proof-reader, however, should not have repeated the error of the first edition in the second, namely: the period following "vitamin E" on contents page, chapter head and running page head.

Housekeeping on Parade. A Book of Practical Ideas for Housekeepers in Hotels, Hospitals, Clubs and Institutions. Chicago: The Hotel Monthly Press, John Willy, Inc., 1937, pp. 90. Price $1.00.

Undoubtedly there is a wide assortment of housekeeping practices to be found in the 25,000 hotels in the United States. From some of these that have gained fame for uniformly good and clean accommodations, a vast amount of practical information has been assembled within the covers of this excellent manual. Miss Palmer of the Hotels Statler Company was first interviewed, and the standard practices for bed

making, daily care of guest room, systematic cleaning, servicing, refinishing and removing of stains are those routinely followed by this famed chain of hotels. Detailed directions are given for maids, cleaners, inspectors and so on. Even a silk stocking test is included — an old silk stocking is used to wipe all exposed surfaces of woodwork in rooms and any splinters so exposed are immediately reported to the cabinet worker. The same test, we feel, might well be applied to the legs of tables set up for committee meetings, for women have been known to attend such meetings.

A section on the hotel housekeeper follows, covering traits, place in organization, appearance and responsibilities, including a discussion of problems of employee management, work control forms, and regulations for conducting the department. This section supplements the previous sections and covers as well the more obscure details—the oiling of door hinges, and the replacing of wobbly penholders and used shoe-shine cloths with new.

Anne Owens of the Sherry-Netherland, New York, follows with a discussion of the training and background for executive housekeepers. "Recent years. . . . have provided an incentive for women of higher education to enter this field of business", and "hotel housekeeping is an applied science." It is a job that is non-competetive with men and one in which women are welcomed as business associates. Hotels in the United States constitute the ninth largest industry, and according to Lucius Boomer there are not enough *competent* housekeepers to supply the demand.

Concluding sections deal with housekeeping in a seasonal hotel, a working manual for a housekeeping department, simplifying the housekeeper's records, how to buy linens, executive housekeeping for hospitals, small hotel housekeeping, insect control, housekeepers' organization charts, and an index. "Plastic" bound for convenience in use, and brimming over with helpful information, this book should prove invaluable to both practicing and potential housekeepers.

The Avitaminoses. By Walter H. Eddy, Ph.D. and Gilbert Dalldorf, M.D. Baltimore: The Williams & Wilkins Company, 1937, pp. 338. Price $4.50.

This book is the result of eight years' collaboration between Professor Eddy, a biochemist engaged in nutrition research, and Dr. Dalldorf, a physician and pathologist. Their studies "have dealt particularly with the development of anatomical criteria by which to evaluate the results of dietary experiments and, more recently, the application of this knowledge to the practice of medicine including the search for anatomical evidence of deficiency disease in human tissues at autopsy and in the wards and clinics." A book written by these two men after such a period of mutual interests and coöperative study and after careful review of the findings of others studying these same problems, will be worthy of very serious consideration by physicians and pathologists and will also be of great interest to dietitians and biochemists. It is the first English book whose chief purpose is to call attention to pathological responses—sub-clinical and acute—to vitamin deficiencies in the diets of human beings as well as of experimental animals. It is not intended to be a complete treatise on the general subject of the vitamins.

In Part I the authors discuss in turn vitamin A, vitamin B and the B-complex, pellagra, and vitamins C, D, and E. Excellent summaries are included on the status of our present chemical knowledge of each of the vitamins, and of their properties and functions. The last three chapters in this section are more general in nature. The first presents the much misunderstood problem of the vitamins in relation to resistance to infections. The authors are to be commended especially for their presentation of this discussion. Another chapter emphasizes the probable value of carefully conducted studies, on experimental animals, of the pathological effects of diets containing combinations of partial deficiencies of various dietary essentials, representing types of diets consumed by large groups of people in different parts of the world, for correlation with clinical and pathological findings on

the incidence of disease among such peoples. The last chapter contains a discussion of the relation between various vitamins and blood regeneration.

Part II consists of three chapters: (1) a careful presentation of standard methods for biological assay of the vitamins; (2) clinical tests for the vitamin deficiencies; (3) tables giving the common types of food and their value as sources of vitamins A, B and C (expressed as international units per ounce) and of vitamin G (or riboflavin) expressed as Sherman-Bourquin units per ounce.

It is hoped that the interest aroused among physicians by a study of this book and the coöperative investigations it will stimulate between them and their pathologists and dietitians, will result in solution of some of the many problems of human disease and ill health still so baffling to students of medicine.—MARTHA KOEHNE, *Nutritionist, Dept. of Health, State of Ohio, Columbus.*

American Menu Maker. New York: The American Menu Maker, 1936. pp. 750. Price $19.50.

This volume, while marketed for the restaurateur, is also a useful adjunct to the dietitian's desk. The authors have collected and put in convenient loose-leaf form approximately 1000 pages. The type is large and easily read and the paper durable.

There are fifteen sections thumb-indexed with celluloid markers, beginning with appetizers and continuing through the various menu items to desserts. Each section is prefaced by a list of 50 to 200 menu suggestions or the names of recipes which follow in the order of thumb listing. The number of portions is given for each recipe. These, however, are not for a standard number but vary from one to 100 portions, the average being under 50. Measurements are based on weights or "level measures."

Another valuable addition to each of the meat sections, beef, veal, pork and lamb, consists of several pages of charts and illustrations showing wholesale cuts and illustrations of their uses, also suggestions for buying together with specifications for same. A table, "Standard Portion and Purchasing Guide," is included.

Another section is devoted to menu planning, the discussion centering about nine principles, including price, number of items, seasonal foods, equipment, taste contrast, variety, color, and leftovers.

Perhaps the value of the book lies chiefly in the fact that within one volume reference material has been assembled which ordinarily is scattered in several volumes and in numerous bulletins and pamphlets. The book is convenient, not only for the one who makes the menus but for the guidance of the chef and cooks as well.—LENNA F. COOPER, *Chief, Department of Nutrition, Montefiore Hospital, New York City.*

Elements of Food and Nutrition. By Mary T. Dowd and Alberta Dent. New York: John Wiley and Sons, Inc., 1937, pp. 279. Price $1.75.

This helpful and scientifically sound new textbook is designed primarily for the high school student, grades 9 to 12. The authors hope that it will also be helpful to the adult and housewife, unblessed by the benefits of home economics training. The book is pleasingly and helpfully illustrated with photographs, reproductions of Bureau of Home Economics charts, etc. The subject matter is interestingly presented and has been properly collated with source material. In view of the general excellence of this new textbook, it is hoped that with the second edition the following will be corrected by the proof-reader: certain typographical inaccuracies in titles of books and authors, and inconsistencies in the use of capitals, etc., in the tabular material of the appendix.

Modern Dietary Treatment. By M. ABRAHAMS and E. M. WIDDOWSON. London: Baillière, Tindall and Cox, 1937.

This book is the first of its type to be published in England. Miss Abrahams, the senior author, is a member of the American Dietetic Association as well as of the newly formed British Dietetic Association.

Treatment of diets is direct, simple and not too technical. The conciseness of the book does not allow for complete discussion of the rationale of dietary modifications, although all of the working essentials are

given. The tables are quite complete, with analyses of cooked as well as raw foods, the figures being expressed in grams or milligrams per ounce, instead of per hundred grams. The grouping of foods according to carbohydrate content varies from that commonly used in the United States.

There is an "easy reckoner" suggested for diet kitchen work. Recipes are included for all common English dishes. The diets, tables, and text are clearly cross-referenced in the index. An excellent chapter on diets for Jewish patients is included.

The choice of type makes the book easy to read. The presentation is one that will appeal to physicians, dietitians and nurses for practical usage in hospital, convalescent home, or office work.

Diet Manual, Cook County Hospital. Compiled and revised by the staff of the Dietary Department, Millie E. Kalsem, director. Chicago: The Cook County Hospital, 1937.

This manual comprises the special and general diets, tables of food composition and measurement, vitamin values and sources in foods, sources of minerals and other useful dietary data.

The Rockefeller Foundation: A Review for 1936. By Raymond B. Fosdick. New York: The Rockefeller Foundation, 1937.

This is a report of the Foundation's program for 1936, during which financial coöperation was extended 130 agencies; grants made to 222 scholars engaged in scientific work; and 700 fellowships provided for the postgraduate training of "young men on whom will fall the burden of future leadership in fields of science, public health, and social welfare." In addition, the various researches of the Institution's field staff of 70 public health experts was continued.

Food Consumption of Wisconsin Farm Families. By May L. Cowles. Madison, Wisconsin: University of Wisconsin, 1937. Stencil bulletin, 27 pp.

This is a report of a survey on work or commodity relief families in the land purchase area of Forest County, Wisconsin. The purpose of the study was: to determine exact character and cost of dietaries as consumed; to discover the extent of supplementation with home produced foods; to ascertain the adequacy of relief diets, and compare results on controlled food issuance with situations in which food is freely chosen; to evaluate the extent to which lack of management skill or knowledge within the home influences the production of a satisfactory diet from the food as issued. Briefly, conclusions were as follows: there is need for emphasis on education in food values and preparation, budgeting and management, and guidance in canning more foods of greater nutritional value; especial care and attention should be given large families to avoid dietary deficiencies; considerable leeway as to cost will have to be allowed in any diet having free choice rather than controlled issuance in food.

Little Gold Business Books. Stamford, Conn., the Hospitality Guild, 1937.

The Efficient Waitress, by J. O. Dahl, has just appeared in a new edition, price fifty cents.

CURRENT LITERATURE

American Journal of Digestive Diseases and Nutrition

Vol. 4, April, 1937

* A study of the glycemic response in patients with biliary tract disease. H. A. Rafsky.—p. 83.
* Colloidal aluminum hydroxide in the treatment of peptic ulcer. C. R. Jones.—p. 99.
* Alcohol as a stomachic. L. Krueger and F. C. MacIntosh.—p. 104.

Vol. 4, May, 1937

* The mechanism of milk clotting. I. Rôle of milk components in coagulation. I. N. Kugelmass.—p. 170.
* Influence of fat on the absorption of dextrose from the human alimentary canal. M. Wishnofsky, A. P. Kane, and W. C. Spitz.—p. 174.
* Enzymic efficiency in avitaminosis. VII. Peptic digestion in vitamin B deficiency. B. Sure and R. T. Harrelson.—p. 177.
* Pepsin versus hydrochloric acid in the experimental production of gastric ulcer. M. J. Matzner and C. Windwer.—p. 180.
* In what way does a full stomach add to the troubles of a failing heart? W. C. Alvarez.—p. 184.

Colonic "vomiting" due to faulty eating. F. L. Burnett.—p. 184.

BILIARY TRACT DISEASE. Gall stones are probably the result of a metabolic disturbance rather than a cause. Decreased glucose tolerance was observed more frequently in non-diabetics having gall stones. Surgical intervention resulted in improved glucose tolerance in most instances. Hepatic dysfunction, rather than pancreatic impairment, appears to be the underlying factor in the disturbed carbohydrate metabolism.

ALUMINUM HYDROXIDE IN PEPTIC ULCER. A brief abstract of 24 case histories of patients affected with peptic ulcer. With the use of colloidal aluminum hydroxide, all but one had complete relief of symptoms.

ALCOHOL AS A STOMACHIC. Dilute alcohol stimulates the gastric glands, evoking a copious flow of gastric juice of high acidity and low digestive power. On continued administration, alcohol may become a conditioned stimulus for gastric secretion, and in these circumstances causes the secretion of a juice of high digestive power.

MECHANISM OF MILK CLOTTING. Milk clotting involves the transformation of soluble caseinogen into an insoluble form. With the action of rennin, calcium paracaseinate is formed; with acid or heat, casein; and with more than one of these coagulants, a combination of these precipitates. Three constituents form the clot—caseinate, phosphate and calcium—consisting of but 2% of the composition of milk in the form of the largest molecular aggregates. The rate of clotting is a direct function of the concentration of the caseinate, rennin, calcium and hydrogen ions. Diminution of any of these factors changes the character of the curd from tough to gelatinous, to flocculent and finally to gritty consistency at extreme dilutions, the curd tension varying inversely with the clotting time.

INFLUENCE OF FAT ON ABSORPTION OF DEXTROSE. It is the consensus that dextrose is absorbed much more rapidly from a straight solution than from a mixture of foodstuffs. Results obtained from experimental studies on eleven diabetic patients, however, indicate that the rate of intestinal absorption of dextrose admixed with fat is not appreciably less than that of dextrose given alone.

PEPTIC DIGESTION IN VITAMIN B DEFICIENCY. There is no significant change in the rate of peptic digestion, either in a deficiency of the vitamin B complex or in vitamin B deficiency associated with varying degrees of paralysis.

PEPSIN VERSUS HYDROCHLORIC ACID IN THE PRODUCTION OF ULCER. Pepsin in an acid medium is far more effective than hydrochloric acid alone in the experimental production of ulcer-like gastric lesions in the albino rat. Fasting appears to be an important factor. This rapid method of producing ulcers is suggested for the study of prevention and treatment of peptic ulcer.

A FULL STOMACH AND HEART DISEASE. After a meal, the blood flow more than

doubles, not only in the vessels supplying the digestive tract, but elsewhere in the body. A person whose heart is ordinarily just strong enough to stand the extra strain of a short walk is not able to do so after meals without distress or pain in the epigastrium. Thus "indigestion" may often be mistaken for angina pectoris.

American Journal of Diseases of Children

Vol. 53, April, 1937

* Effect of carbohydrate on certain factors in fatigue. F. W. Schultz and E. Blish.—p. 960.
* Growth and basal metabolism. V. Basal metabolism of high school children. I. Nakagawa.—p. 985.
* Growth and basal metabolism. VI. Changes in the basal metabolism of children during puberty. I. Nakagawa.—p. 991.

Vol. 53, May, 1937

* Studies of hypovitaminosis A: III. Clinical experiments in the vitamin A balance in children after various diets. C. Friderichsen and C. Edmund.—p. 1179.
* Ingestion of vitamins A, B, C and D, and poliomyelitis. J. A. Toomey.—p. 1202.

CARBOHYDRATE AND FATIGUE. Exercise in the fasting condition elicits a uniform response, increasing the content of fixed acid in the blood in both normal and asthenic child. Dextrose seemed to be the most efficient sugar studied for the alleviation of the accumulation of lactic acid due to exercise. Lactose and sucrose had no inhibiting effect on rise in level of exercise-fixed acid in the subject studied.

BASAL METABOLISM OF HIGH SCHOOL CHILDREN. It has not been conclusively demonstrated which physical factor (body weight, height or surface area) is the best unit for the expression of heat production. In comparison with Talbot standards, total heat production of Japanese high school children was found to be low.

CHANGES IN BASAL METABOLISM DURING PUBERTY. The basal metabolism, together with body weight and height of 24 children studied every six months throughout the pubertal period, showed a higher increase in total heat production as well as weight and height. Increase begins at age 11 or 12 in boys and at 10 or 11 in girls, and is consistent with the fact that girls attain puberty earlier than boys. A maximum is reached at ages 12 to 13 in boys and at 11 or 12 in girls, and ends before the increase in weight and height at the ages 15 or 16 in boys and at 14 or 15 in girls. The increase in the total heat production probably occurs in preparation for physical changes at puberty.

HYPOVITAMINOSIS. A water diet of from 24 to 48 hours' duration brings about a gradual depletion of the vitamin A content as measured by means of the reflex irritability of the eye to light. The infant is unable to accumulate a large reserve of vitamin A from milk alone, in contrast to the older child who gets an abundant supply of vegetables in addition to milk. The buttermilk diet, the diet minus animal fat, the protein milk diet, or the infants' food diet, when administered for a long period, causes a vitamin A deficiency. Despite their great content of carotene, mashed carrots and carrot juice not always prevent latent avitaminosis A. In contradistinction, dried spinach showed rapid and stable effect.

VITAMINS AND POLIOMYELITIS. Ingestion of vitamin D protects Macascus rhesus monkeys from poliomyelitis when the virus is subsequently introduced by way of the gastro-intestinal tract. Lack of vitamin D makes the animal more susceptible to this disease.

American Journal of Public Health

Vol. 27, May, 1937

* Staphylococci in relation to food poisoning. G. M. Dack.—p. 440.
* A critical study of various types of detergents and disinfectants for use in dishwashing. W. L. Mallmann.—p. 464.

FOOD POISONING. Outbreaks of food poisoning traced to staphylococci have usually incriminated cream-filled pastry or cakes, but a variety of other foods—cheese, gravy, doughnuts, milk, ice cream and meat sandwiches—have also served as vehicles. Unless refrigeration continues after purchase, incubation for a few hours at room tempera-

ture may allow "food poisoning" staphylococci to multiply and elaborate toxins. Reheating custard-filled puffs and eclairs does not impair flavor or appearance and should afford an effective safeguard.

DISHWASHING. Certain detergents more efficiently remove bacteria from glassware. Sodium hexametaphosphate, in detergent mixtures, aids. Hot water serves satisfactorily on dishes and silverware. Wash waters should be maintained at not less than 170 F. and rinse waters at not less than 170 F. Chemical disinfection is recommended only when hot water is not available. All glassware and silverware should be routinely examined bacteriologically.

American Journal of the Medical Sciences

Vol. 193, April, 1937

A study of the osseous remains of the "mound builders" of Eastern Arkansas. E. G. Wakefield, S. C. Dellinger and J. D. Camp.—p. 488.

* The gastric acidity in alcohol addicts. With observations on the relation of the B vitamins to achlorhydria. P. M. Joffe and N. Jolliffe.—p. 501.

Vol. 193, May, 1937

Diabetes as a disturbance of endocrine regulation. B. A. Houssay.—p. 581.

Observations on protamine zinc insulin. R. Richardson.—p. 606.

* The one-hour two-dose glucose tolerance test in the diagnosis of diabetes mellitus. S. E. Gould, S. S. Altshuler and H. S. Mellen.—p. 611.

* Dietary deficiency as a cause of macrocytic anemia. J. Groen and I. Snapper.—p. 633.

The secretion of hippuric acid in pernicious anemia. P. J. Fouts, O. M. Helmer and L. G. Zerfas.—p. 647.

GASTRIC ACIDITY IN ALCOHOL ADDICTS. Gastric acidity curves of 105 chronic alcohol addicts were studied. Whereas expected incidence of achlorhydria in a normal group would be 11%, in the alcoholic group it was 33%. Achlorhydria was not related to the degree or duration of the alcohol addiction. An achlorhydria preventive factor, present in the vitamin B complex, is suggested.

GLUCOSE TOLERANCE TEST. The three-hour, one-dose glucose tolerance test is not specific for the diagnosis of diabetes mellitus. New diagnostic criteria are proposed through the use of the one-hour, two-dose glucose tolerance test.

DIETARY DEFICIENCY IN MACROCYTIC ANEMIA. A clinical picture closely resembling pernicious anemia was observed in 2 cases where the history revealed prolonged and pronounced dietary deficiency. Free hydrochloric acid in subnormal amounts was found in the gastric juice. In one, recovery induced by liver extract was maintained for 6 years on a complete diet without further liver treatment. In the other, complete remission was maintained by a mixed diet containing plenty of meat, milk and autolyzed yeast, but no liver.

Archives of Internal Medicine

Vol. 59, April, 1937

* Retention and utilization of orally administered iron. W. M. Fowler and A. P. Barer.—p. 561.

* Chronic nephritis in rats fed high protein diets. N. R. Blatherwick and E. M. Medlar.—p. 572.

* Effect of sunlight on the clinical manifestations of pellagra. D. T. Smith and J. M. Ruffin.—p. 631.

* Relation of experimental atherosclerosis to diets rich in vegetable protein. R. H. Freyberg.—p. 660.

Liver and biliary tract: a review for 1936. C. H. Greene, M. B. Handelsman and A. M. Babey.—p. 724.

Vol. 59, May, 1937

* Influence of gastric acidity and degree of anemia on iron retention. A. P. Barer and W. M. Fowler.—p. 785.

* Absorption of fat from the ileum of human beings. H. Doubilet and M. Reiner.—p. 857.

* A review of four hundred and forty cases of pellagra. V. P. Sydenstricker and E. S. Armstrong.—p. 883.

RETENTION OF IRON GIVEN ORALLY. Orally administered iron and ammonium citrates to patients with hypochromic anemia averaged 32.6% retention. Approximately 1.96% of the iron administered was utilized in the formation of hemoglobin. There was no correlation between the amount retained and the increase in the hemoglobin content.

CHRONIC NEPHRITIS IN RATS FED HIGH PROTEIN DIETS. In chronic nephritis produced in rats on diets high in protein, functional impairment of the kidney may exist for some time before histologic changes indicative of nephritis become apparent. Female rats were more refractory to the production of nephritis by diet than males. Desiccated thyroid added to the diet of

nephrectomized females favored development of nephritis. Feeding of irradiated yeast led to hydronephrosis, calcification of the aorta and formation of renal calculi. An injurious factor may exist as such in the diet, or be produced during metabolism; if in the diet, it may not necessarily be confined to the protein fraction. The nephritis may be induced by an abnormal excretion of normal end-products, an excretion of abnormal products, or retention of certain products.

EFFECT OF SUNLIGHT ON PELLAGRA. The clinical impression that sunlight is harmful to the pellagrin has been amply confirmed by observations under controlled conditions. Thirty-five pellagrins on deficient diet were exposed to direct rays of the sun. In 13, dermatitis developed, followed promptly by moderate or marked accentuation of constitutional symptoms. The danger of exposing susceptible pellagrins to the sun's rays cannot be overemphasized. Seasonal incidence of pellagra is apparently conditioned by 2 factors: degree of dietary deficiency and intensity of solar radiation.

EXPERIMENTAL ATHEROSCLEROSIS. Diets containing 33 and 37.8% of vegetable protein, fed to rabbits for as long as 11 months, failed to produce atherosclerosis. Data suggest that atherosclerosis observed in rabbits fed diets rich in muscle meat was due to a non-protein constituent.

ACIDITY AND IRON RETENTION. Achlorhydria decreased retention of iron from a normal dietary intake, but did not influence retention when large amounts of iron were administered orally. Addition of hydrochloric acid did not increase retention. The presence of anemia did not influence amount of iron retained. A dietary intake of 6.7 mg. of iron per day was insufficient for iron balance.

ABSORPTION OF FAT FROM THE ILEUM. Observations on absorption of fat from the ileum of a human subject showed that a fluid containing about 2% of lipids was secreted. The presence of bile acids increased the secretory volume. Bile acids in small amounts apparently have no effect on absorption rate of fats from the ileum.

PELLAGRA. Contrary to general opinion, the southern Negro lives well. While his diet may be somewhat low in proteins of optimum biologic value, it is rich in green vegetables of good vitamin B_2 content. Neglect of symptoms cannot be considered the cause, as the Negro population in question has been the object of almost paternal medical supervision for nearly a century, and medical advice is sought for most trivial complaints. Alcohol, as an apparent etiologic factor, was almost negligible in this group. That changes in the gastrointestinal function are primary and causative, rather than secondary to pellagra, is an attractive hypothesis.

Archives of Pediatrics

Vol. 54, May, 1937

* Physiological and nutritional anemias of infancy—a review of the literature. G. R. Alpert.—p. 268.
* Renal rickets—report of case. S. Goldberg and J. L. Candido.—p. 291.

ANEMIAS OF INFANCY. A physiological anemia develops in premature and full term infants, being most marked at the age of 2 to 3 months. Iron in a soluble form is the best therapeutic agent, with the exception of human blood given parenterally. Suitable prophylaxis in infancy should be a routine procedure.

RENAL RICKETS. In a boy 6 years of age, retardation in growth and development was first noticed at 5 months of age. Although he received adequate amounts of antirachitic vitamin D, he developed skeletal deformities because of a probable, early and persistent renal infection and insufficiency.

Journal of Biological Chemistry

Vol. 118, April, 1937

* Metabolism and mode of action of vitamin D. II. Storage of vitamin D in different tissues *in vivo*. W. Heymann.—p. 371.

Vol. 118, May, 1937

* The lipid and mineral distribution of the serum and erythrocytes in pernicious anemia. H. H. Wil-

liams, B. N. Erickson, S. Bernstein, F. C. Hummel, and I. G. Macy.—p. 599.

* Blood as a physiochemical system. XII. Man at high altitudes. D. B. Dill, J. H. Talbott and W. V. Consolazio.—p. 649.

* Influence of the inorganic salts in the diet on the composition of the ash of certain tissues of the rat. E. S. Eppright and A. H Smith.—p. 679.

* Biocatalytic activators specific for the yeast fermentation of maltose. M. J. Blish and R. M. Sandstedt.—p. 765.

STORAGE OF VITAMIN D. Twelve male rabbits were given 200,000 U.S.P. units of vitamin D by stomach tube. It was found that vitamin D was stored in the brain for 1 to 2 weeks; erythrocytes, 5 to 6 weeks; small intestines, 5 to 8 weeks; large intestines, 6 to 8 weeks; skin, 6 to 8 weeks; lungs, 6 to 9 weeks; kidneys, 6 to 9 weeks; liver, 6 to 8 to 12 weeks; and blood plasma, 8 to 12 weeks and more. Consumption of vitamin D within the tissues, if at all, is very slight. Probably excretion is the chief means by which the body is depleted of vitamin D deposits.

LIPIDS AND MINERALS IN BLOOD. Serum minerals appear to be unaffected in pernicious anemia, but plasma lipids are characterized by increased amount of neutral fat with a concomitant deficiency of cholesterol esters and phospholipid, which return to normal levels after therapy. Contrary to general belief, the chemical composition of the erythrocytes exhibits striking abnormalities indicative of deficient corpuscular structure. The red cells of pernicious anemia in relapse are characterized by presence of excessive amounts of cholesterol esters, a deficiency of phospholipid and free cholesterol esters, and a deficiency of phospholipid and free cholesterol. After therapy, chemical composition of the erythrocyte becomes normal concomitantly with subsequent improvement of hematological and clinical picture upon remission.

MAN AT REST. Distribution of combined CO_2 between arterial cells and serum is unchanged at high altitudes, aside from responses due to changes in pH and per cent saturation with oxygen. There appears to be a decreased proportion of chloride in the cells. Owing to increase in proportion of red cells, the buffer value of blood is increased; the pH change in the respiratory cycle is one-fourth less; and the decreased alkaline reserve reduces capacity of the body to neutralize fixed acids. The increase in hemoglobin and decrease in alkaline reserve occur slowly; months may be required for hemoglobin to reach a maximum, and arterial CO_2 content, a minimum.

INORGANIC SALTS IN DIET. Potassium and sodium contents of muscle are influenced more by calcium than by potassium and sodium in the diet. The ratio of potassium and sodium in muscle tissues, much distorted on the sodium chloride, or sodium chloride plus potassium regimes, is quite normal when calcium is abundantly supplied, even though the diet is poor in these elements themselves. Potassium and sodium are mutually antagonistic with respect to their retention in muscle; diminished potassium and augmented sodium, in general, accompany a poor nutritional state. The chloride content of muscle does not follow these shifts of base, but varies more directly with the level of chloride in the diet. Directly or indirectly, removal of calcium and phosphorus from the diet greatly reduces the lipids in tissues, particularly the skin.

ACTIVATORS FOR MALTOSE FERMENTATION. Fresh bakers' compressed yeast is usually strikingly deficient in its ability to ferment pure maltose, alone, as compared with maltose in the presence of other biological substances. Flour and dried yeast preparations, respectively, contain accelerators that are specific for maltose fermentation and distinctive for ability to (1) eliminate or greatly shorten induction period, (2) increase fermentation rate, and (3) reduce "fermentation deficit."

Journal of Laboratory and Clinical Medicine

Vol. 22, May, 1937

* A study of the relation of rickets to anemia. K. B. McDonough and D. R. Borgen.—p. 819.

* The extraction of cholesterol from blood. H. J. Rose and C. Riegel.—p. 867.

RELATION OF RICKETS TO ANEMIA. Rachitic chicks between 2 and 6 weeks of age did not demonstrate a significant difference from normal chicks in hemoglobin content. Analysis of livers of normal and rachitic chicks revealed no significant difference in total and available iron content. In the rachitic, abnormal calcium and phosphorus metabolism had no effect on absorption and storage of iron.

EXTRACTION OF CHOLESTEROL FROM BLOOD. Cholesterol, free and combined, can be extracted from whole blood, plasma, or serum equally well by single extractions made with alcohol ether or alcohol acetone, or by multiple extracts with ether.

Journal of Nutrition

Vol. 13, April, 1937

* The gizzard factor of the chick. H. J. Almquist and E. L. R. Stokstad.—p. 339.

Review. Recent studies of vitamins required by chicks. T. J. Jukes.—p. 359.

* The identity of flavin with the cataract-preventive factor. P. L. Day, W. J. Darby and W. C. Langston.—p. 389.

* The protein minima for nitrogen equilibrium with different proteins. D. Melnick and G. R. Cowgill.—p. 401.

* The vitamin B and vitamin C content of marine algae. E. R. Norris, M. K. Simeon and H. B. Williams.—p. 425.

* The multiple nature of the vitamin D of fish oils. C. E. Bills, O. N. Massengale, M. Imboden and H. Hall.—p. 435.

Vol. 13, May, 1937

* Alleviation of vitamin B deficiency in the rat by certain natural fats and synthetic esters. W. D. Salmon and J. G. Goodman.—p. 477.

* The relation of ingested carbohydrate to the type and amount of blood and urine sugar and to the incidence of cataract in rats. H. S. Mitchell, O. A. Merriam and G. M. Cook.—p. 501.

* Influence of hyperthyroidism on vitamin A reserves of the albino rat. B. Sure and K. S. Buchanan.—p. 521.

* The vitamin G content of some foods. H. Levine and R. E. Remington.—p. 525.

* The minimum vitamin A and carotene requirement of cattle, sheep and swine. H. R. Guilbert, R. F. Miller and E. H. Hughes.—p. 543.

GIZZARD FACTOR OF THE CHICK. Gizzard erosions or lesions are caused by a deficiency in a fat-soluble factor not identical with any known vitamins. The best practical sources of this factor known are fresh and dried greens and wheat bran. Presence or absence of gizzard erosions, or of the gizzard factor in the diet, has no appreciable effect on growth of chicks.

PREVENTION OF CATARACT BY FLAVIN. Young rats given a diet deficient in all B vitamins developed cataract and alopecia. Litter mates receiving the same diet, supplemented with lactoflavin, did not exhibit cataract. Growth was roughly proportional to amount of flavin fed.

PROTEIN MINIMA. Lactalbumin, serum protein, casein and gliadin have been evaluated with respect to minimal amount of each essential for nitrogen equilibrium in the dog. Corresponding relative biological values for these proteins are: 100, 80, 73 and 33.

VITAMINS B AND C IN MARINE ALGAE. Six of the 7 algae tested were found to be good sources of vitamin B, comparing favorably with many fruits and vegetables. A few were found to be as rich in vitamin C as lemons bought in the local market. Algae growing in the littoral zone or on the surface tend to be higher in vitamin C than those from a depth of 5 to 10 fathoms.

VITAMIN D OF FISH OILS. Liver oils of 25 species of fish were assayed in comparison with cod liver oil. Some resembled cod liver oil, several were less effective, and a few more effective.

FATS ALLEVIATE VITAMIN B DEFICIENCY. High percentages of fat in vitamin B deficient diets increased rate of growth and decreased incidence of beriberi in rats. Cocoanut fat was the most effective natural fat tested. Effectiveness of esters of single fatty acids in alleviating the symptoms of vitamin B deficiency in rats depended on length of the carbon chain of the fatty acids.

BLOOD AND URINE SUGAR IN CATARACT. Galactose is the sugar responsible for both high blood and high urine sugars observed in rats fed on lactose and galactose rations and must be the major etiological factor in this type of cataract.

HYPERTHYROIDISM AND VITAMIN A. A diet containing 50% dried skimmed milk powder furnishes sufficient of the components of the vitamin B complex, so that excellent responses are obtained to pure crystalline vitamin B as an antithyrogenic agent in experimental hyperthyroidism.

VITAMIN G CONTENT OF SOME FOODS. Cottonseed meal, soy beans, dried whole milk and dried brewer's yeast were found to be good sources of vitamin G. Milk from a pellagrous region was apparently as potent in flavin as that from other localities.

MINIMUM VITAMIN A REQUIREMENT. The minimum carotene requirement for sheep, cattle and swine was found to be 25 to 30 micrograms daily per kgm. body weight, an amount in agreement with similar data on the rat. The minimum vitamin A requirement was found to be 6 to 8 micrograms daily per kgm. body weight. Vitamin A requirement is directly related to body weight, rather than to energy requirement.

Journal of the American Medical Association

Vol. 108, April 3, 1937

* Protein, salt and fluid consumption of 1000 residents of New York. B. I. Ashe and H. O. Mosenthal.—p. 1160.
* Spray residue on foods. Editorial.—p. 1178.
* Effect of garlic on the flavor and odor of milk. Current comment.—p. 1181.

Vol. 108, April 10, 1937

* Protamine insulin in juvenile diabetes. H. R. Drysdale.—p. 1250.
* Salivary immunity. Editorial.—p. 1264.

Vol. 108, April 17, 1937

* Protamine insulin versus ordinary insulin. A Sindoni.—p. 1320.
* Prostigmin as an aid in the diagnosis of myasthenia gravis. A. M. Harvey and M. R. Whitehill.—p. 1329.
* Amino acids as limiting factors in malignant growths. Editorial.—p. 1344.

Vol. 108, April 24, 1937

* Subacute combined degeneration in pernicious anemia. Current comment.—p. 1437.
* Carbohydrate metabolism. Current comment.—p. 1437.

Vol. 108, May 8, 1937

* Hereditary factors in epilepsy. H. A. Paskind and M. Brown.—p. 1599.
* Calcium therapy in dentistry. Editorial.—p. 1655.

Vol. 108, May 15, 1937

* An antihemorrhagic factor in foods. Editorial.—p. 1717.

Vol. 108, May 29, 1937

* Metabolism in pregnancy. Editorial.—p. 1892.
* Vitamin D milk. Current Comment.—p. 1894.

PROTEIN, SALT AND FLUID. Twenty-four hour urine samples from 1,000 residents of New York City were studied. Sixty % of this group were found to be eating 42 gm. or less of protein daily. The majority were found to take moderately high salt (from 4 to 8 gm. or more) and moderate fluid (1,000 cc. or more). There was no relation between protein, salt and water intake. While the normal individual eating a low protein diet tends to have a low blood pressure and a low hemoglobin percentage, the normal person eating a high protein diet has no increased blood pressure and his hemoglobin is normal. People with hypertension do not habitually eat more protein or salt than normal persons. There is no evidence to show that a low protein diet will materially reduce blood pressure in a hypertensive subject, provided there is no anemia.

SPRAY RESIDUE ON FOODS. To minimize the possibility of poisoning from foods contaminated by lead or other metallic spray residues, the federal government has established maximum values for amounts of these metals that may be present in sprayed fruits for interstate commerce. Colorado and Michigan are the only states whose laws protect consumers of fruits and vegetables distributed in interstate commerce. There is urgent need for state laws of this type. A 1% hydrochloric acid rinse is a simple and reliable procedure which mitigates this potential danger.

EFFECT OF GARLIC ON FLAVOR AND ODOR OF MILK. Samples of milk taken from cows 3½ and 5 minutes after being fed garlic, were not normal in flavor and odor. The

short interval indicated that it is not necessary for garlic to go through the usual digestive process before its flavor is detected in the milk. When cows were milked 2 minutes after having inhaled garlic for 10 minutes, the garlic flavor and odor were pronounced in the milk.

PROTAMINE INSULIN IN JUVENILE DIABETES. In 10 cases of juvenile diabetes controlled with protamine insulin, all insulin is given before breakfast. Roughly, one-third of the daily carbohydrate is given at each meal. Protamine insulin is most effective under a high carbohydrate, low calorie diet.

SALIVARY IMMUNITY. Normal human saliva contains enzymic factors that not only inhibit the multiplication of diphtheria bacilli *in vitro*, but often kill these within a few hours. Virulent bacilli not killed by contact with this normal salivary antiseptic are almost invariably transferred into avirulent types. Hemolytic streptococci are often killed in from 5 to 6 hours in normal human saliva.

PROTAMINE INSULIN VERSUS ORDINARY INSULIN. Since protamine insulin is inadequate to oxidize rapidly absorbed dextrose, it should be prescribed only as an aid to ordinary insulin. Together they promote ideal insulin therapy for patients otherwise requiring large doses of ordinary insulin.

PROSTIGMIN IN MYASTHENIA GRAVIS. Administration of prostigmin in 9 instances resulted in a striking immediate improvement in myasthenia gravis, and appears to be the most valuable treatment of this disease at present.

AMINO ACIDS IN MALIGNANT GROWTH. A diet deficient in cystine and methionine will cause slowing or even cessation of growth of a typical neoplasm in young rats. The same diet inhibits normal growth of young mice. Furthermore, a period of inhibited tumor growth will be followed by one of marked stimulation when either cystine or glutathione are given.

SUBACUTE COMBINED DEGENERATION IN PERNICIOUS ANEMIA. Seventy-four persons with pernicious anemia associated with definite subacute combined degeneration of the spinal cord were treated with bed rest, daily oral administration of extract from 1,000 gm. of liver, and sometimes, in addition, from 113 to 142 gm. of whole liver. This therapy continued for sufficiently long periods will completely arrest or greatly improve cases of subacute combined degeneration in anemia.

CARBOHYDRATE METABOLISM AND VITAMIN C. A recent report indicates that carbohydrate metabolism is influenced by cevitamic acid. In guinea pigs, the index of effect produced was the alteration in the blood sugar concentration after oral administration of dextrose. Each animal was its own control; the normal response was compared to that obtained after 10, 15 and 20 days on a scurvy-producing ration. With deprivation of cevitamic acid, there was a progressive decrease in ability to dispose of the absorbed sugar. As similar metabolic changes were not observed in other vitamin deficiencies, it is concluded that the effect is more or less specific for cevitamic acid.

EPILEPSY. Studies of the hereditary factors in epilepsy have heretofore been almost exclusively on deteriorated institutional epileptics. Hereditary factors in a group of nondeteriorated, well adjusted, extramural epileptics, indicates an heredity carrying a lighter burden of neuropathy than that of deteriorated, institutional patients. Migraine and nervousness were more common in parents of the non-deteriorated, but psychosis was more than 5 times as frequent in extramural ones, epilepsy more than 3 times as frequent, alcoholism more than 8 times as frequent, and apoplexy more than twice as frequent.

CALCIUM THERAPY IN DENTISTRY. The Council on Dental Therapeutics after a review of critical evidence have concluded that: (1) All calcium and phosphorus re-

quirements for average needs, including pregnancy and growth, may be suitably obtained by means of an adequate diet. (2) There is no carefully controlled evidence that addition of calcium and phosphorus compounds promotes retention of these elements except in known cases of deficiency. (3) There is no evidence that ingestion of combinations of calcium and phosphorus in addition to diets adequate in these elements promotes the development of sound teeth in the human fetus. Calcification of teeth is a postnatal event. The council emphasized that empirical prophylaxis by regulation of the diet of children is distinctly effective and deserves more universal adoption.

ANTIHEMORRHAGIC FACTOR IN FOODS. A new vitamin-like substance, vitamin K, is apparently in the process of gradual evolvement. Antihemorrhagic, the substance is found in association with vitamin C, can be separated from it, and is obtained in relative abundance from alfalfa.

METABOLISM IN PREGNANCY. Pregnancy, from the point of view of physiologic economy, is a period of material gain to the maternal organism. When continuous balance studies are carried out through a large part of the periods of pregnancy and lactation, sufficient materials are probably stored during pregnancy to cover the losses incident to parturition and lactation. The maintenance of a favorable physiologic and nutritional background at other times is an important safeguard for the metabolism of pregnancy.

VITAMIN D MILK. The Council on Foods of the American Medical Association has decided that milk is the only common food that will be considered for acceptance when fortified with vitamin D. In the United States, vitamin D fluid milk is now being consumed at the rate of about 400,000,000 quarts annually. The yearly consumption of evaporated vitamin D milk is equivalent to 800,000,000 quarts of fluid milk. This represents only a small percentage of the total milk consumption.

INSTITUTION MANAGEMENT

The American Restaurant Magazine

Vol. 20, April, 1937

* So this is meal time! Nola Treat.—p. 45.
* Coördination of efficiency and food costs. H. E. Stiles.—p. 47.
* A suggested plan for the high school lunchroom. C. L. Barr and O. F. Hassemer.—p. 51.

Innovations in equipment.—p. 78.

Vol. 20, May, 1937

What do your breakfasts cost? M. Parks.—p. 53.
* Planning the menu in the face of rising food costs. H. E. Stiles.—p. 59.

How incorporating protects your restaurant business. L. T. Parker.—p. 61.
* Some answers on school problems. F. O. Washam.—p. 68.

MEAL TIME. Adventures in food portrayed by Nola Treat of Treat-and-Richards fame as she enjoys Welsh rarebit and orange cream pie at Thompson's Spa, Boston; peeled tomatoes, Parkerhouse rolls and blueberry ice cream at the Parker House; hot butterscotch rolls at the Toll House, Whitman, Mass.; and the relish of sweet Italian onions and baked beans at Salmagundi Tea Room on Beacon Street, Boston.

EFFICIENCY AND FOOD COSTS. The menu must be balanced not only from the standpoint of customer satisfaction and of costs but also from that of "timing." A freshly cooked meal, resulting when the restaurant's production capacity and kitchen is keyed to peak efficiency at the meal hour determines the customer's degree of satisfaction. At Carder's, whipped and baked potatoes are ready in small quantities every 20 minutes during meal hours. Pan fried veal cutlets in family size skillets are rotated on top of the range for service as needed. Thus any losses due to quantities being prepared in advance are greatly reduced. The production loss of a 20¢ item in a restaurant with a 5% net profit requires at least $4 in additional sales. Each item served in every department must have a definitely planned percentage-allowance. A limited

menu makes higher food standards possible, increases efficiency, and reduces storage space needed.

HIGH SCHOOL LUNCHROOM. A layout of a self-service type, with a seating capacity of 750 and a kitchen service capacity of 1500, is described. The dining room allots 8.68 sq. ft. per dining room seat; the dish-washing room, 2.8 sq. ft.; and the manager's office 2.03 sq. ft., with a total of 13.51 sq. ft. per dining room seat for the total area including the kitchen, dish and glass washing, dining room, service unit, ventilating, dressing rooms, and manager's office.

MENU AND RISING COSTS. Left-over dishes means a double labor cost, therefore the more dishes of this type the higher the general labor cost. An entirely separate menu for luncheon and dinner makes a strictly limited menu possible with resultant food production control and makes daily menu changes more obvious to patrons. Reproductions of dinner menus show that almost every item changes daily.

HIGH SCHOOL LUNCHROOM. Includes portions and prices of a number of inexpensive plate luncheons as served in the Chicago school system.

Buildings and Building Management

Vol. 37, March, 1937

* Two stories replace six.—p. 32.
* Air conditioning theory and practice. A. Branch and R. Toensfeldt.—p. 33.

Apartment house maintenance. H. R. Mandel.—p. 53.

Vol. 37, April, 1937

* Systematic control of routine purchasing. R. Porter.—p. 36.
* Extermination of roaches and minor pests. J. N. Laferriere.—p. 51.

Vol. 37, May, 1937

Good electrical work vs. false economy. S. Schuman.—p. 39.

* The essential requirements of good purchasing. H. R. Mandel.—p. 50.

AIR CONDITIONING. Any temperature between 63° and 85°F. is conducive to human comfort provided the moisture content of air is adjusted to correct humidity. Air filtration reduces cleaning and depreciation expense, increases efficiency, and reduces illness of tenants. Various types of air conditioning are discussed with application to stores, apartment houses, theatres and restaurants. Air cooling units require 1/20 H.P. or less, attachable to the regular lighting service. Installation costs can be roughly approximated at $1.75 per sq. ft. floor space; operating expense roughly at 30¢ per sq. ft. per year above present heating costs.

PURCHASING CONTROL. Advises patronage of reliable firms, courteous attention to their salesmen, careful records, specified standards with tests for goods received, current catalogs to acquaint buyer with changes and new products, and careful storage. Purchase record, estimate record, and inventory control cards are reproduced.

EXTERMINATING ROACHES. Powdered boric acid has been found to be almost as effective as sodium fluoride in exterminating roaches and has the advantage of being harmless to humans. Formulas are given for exterminating slugs, sowbugs, millipeds, house ant and strawberry root weevil.

GOOD PURCHASING. Outlines a consecutive order of procedure in purchasing: know the need for the purchase and the quality wanted; demand a written requisition; obtain quotations from vendors; analyze and test specimens offered; write a purchase order; check all invoices and inspect all goods as received; and when possible, use U. S. Government specifications.

Journal of Home Economics

Vol. 29, April, 1937

* Food, drug, and cosmetic bills. Editorial.—p. 250.
* Contribution to data on the composition of some of the more common vegetables. R. Loughlin.—p. 255.
* Varietal differences in the vitamin C (ascorbic acid) content of tomatoes. F. Tripp, G. H. Satterfield, A. D. Holmes.—p. 258.

Vol. 29, May, 1937

Problems of residence hall management. M. Hunter.—p. 297.

* Effects of laundry methods on cotton fabrics. A. E. Ginter, M. Shadduck, M. Partlow, T. Pearson.—p. 319.

FOOD AND DRUG BILLS. A brief summary of the Copeland and H.R. 300 bills before Congress.

VEGETABLE COMPOSITION. Data on beets, beet greens, chard, spinach, kale and rutabagas, presented in tabular form.

VITAMIN C IN TOMATOES. A study of ten varieties of tomatoes shows that the Pritchard and Louisiana Pink are highest in vitamin C values, and the juices from these higher in ascorbic acid content than the others studied. There seems to be no constant relationship between the size of the tomato and the vitamin C content. Soft, over-ripe tomatoes seemed to be lower in C content than firm ripe ones.

LAUNDRY OF COTTONS. A study of cottons to compare the effects of commercial versus home laundry methods.

The Horwath Hotel Accountant

Vol. 17, April, 1937

* Changes with recovery. G. O. Podd.—p. 2.
Effect of volume on food costs.—p. 3.
* What the hotel guest eats.—p. 4.

Vol. 17, May, 1937

* Hotel operations in 1936.—p. 2.
* Food and beverage costs.—p. 3.

CHANGES WITH RECOVERY. Hotel occupancy in 1936, while only 7% below that of 1929, showed a rate level 25% below that of 1929. Restaurant sales, including liquor sales, were 10% short of the 1929 level without liquor. Accompanying these figures are price advances on food costs and supplies, higher payrolls and increased taxes because of social security. Detailed accounts and daily figures of costs and sales are now particularly essential to the manager.

FOOD DOLLAR DISTRIBUTION. An analysis of the restaurant sales for a year in a large New York hotel showed, with slight seasonal fluctuation, the distribution of the dollar among the different foods as follows: sea foods, $.1135; meat, $.1515; poultry, $.1499; fruit and vegetables, $.2133; dairy products, $.0669; beverages, $.0689; pastry and ice cream, $.0850; and all others, $.1510.

HOTEL OPERATIONS—1936. Summarizes in tabular form the operating ratios of a cross section of hotels in 1936. Typical results show an operating profit (before taxes, depreciation, and interest) of 3.46 times the real estate tax, as compared with 2.48 times the taxes for a similar group in 1935.

FOOD AND BEVERAGE COSTS. A 3% reduction in food costs for both January and February was achieved despite a 5% rise in the wholesale price index over the corresponding months of last year.

Hospitals

Vol. 11, April, 1937

* The problems of the small hospital—from the standpoint of food service. A. Coleman.—p. 33.
* Administrative, professional, and economics problems as related to hospital service—from the standpoint of food service. M. J. Ridgway.—p. 64.
Patients' rooms and wards. H. S. Haunaford.—p. 74.
Maintenance of refrigeration equipment. W. W. Fullerton.—p. 90.
* An opportunity for science—cleaning maintenance. J. L. MacFarland.—p. 92.

Vol. 11, May, 1937

An opportunity for science—housekeeping in the hospitals. J. L. MacFarland.—p. 53.
Air conditioning or power plant of the hospital. E. F. Stevens.—p. 74.

SMALL HOSPITAL. Lists minimum personnel and kitchen equipment for the 50–75 bed hospital. Twenty-five per cent of the total budget is accepted standard of expenditure for the dietary department. Meat is purchased twice a week in cuts ready for use, staples twice a month, vegetables as desired. Frozen vegetables and fruits are kept on hand in ice cream cabinet. Only one dietitian is employed, but central tray service allows her to superintend the food service for each patient.

SATISFYING THE PATIENT. Technique in serving various diets to patients in a small hospital.

CLEANING. Selection and care of floor machines, vacuum cleaners, mops, buckets, ladders, brooms, brushes, chamois skins, sponges, uniforms, and purchase of disinfectants, floor waxes, furniture polish, metal polish, detergents and soap products, together with personnel policies as they affect the control and issuance of supplies.

Hospital Management

Vol. 43, April, 1937

* The economical use of a side of beef. W. M. Shaw.—p. 41.
Beef entrees for the hospital menu W. M. Shaw.—p. 42.
Grinstead food price index.—p. 46.

CUTTING CARCASS BEEF. How to buy beef by the carcass. Charts and lists of economical cuts with figures for expected weights of each cut and uses to which each may be put.

Hotel Management

Vol. 31, April, 1937

* Pay as they sell. R. W. Owens.—p. 402.
Stevens apartments are profitable. O. K. Eitel.—p. 405.

Vol. 31, May, 1937

* Training methods for housekeeping employees. C. M. Dahl and L. Fogarty.—p. 545.

PAY AS THEY SELL. A system whereby hotel desk clerks received a specific bonus per gross income brought in an extra revenue of $1000 in one month. The lowest gross income figure that permits operation at a profit was selected as the base for the bonus. Plan gives clerk an interest in business, a better understanding of business cycles, willingness to share vicissitudes of poor business, and helps his self respect by making him a business partner.

TRAINING METHODS. For the new employee, give simple, concise instructions as to relationships between employee and the organization. Follow this by written list for future reference. Discuss in detail hours and wages, uniforms and required appearance, conduct on premises, possibilities of raises and promotions. Demonstrate the job, watch employee do complete job, supervise until mastered, and inspect at intervals thereafter.

The Hotel Monthly

Vol. 45, April, 1937

Macaroni with cheese wine sauce.—p. 29.
* A program of education for the hotel business. D. B. Proulx.—p. 34.

Vol. 45, May, 1937

The new Williamsburg Inn.—p. 15.
Variety for menus with these entrees.—p. 34.
Popular foods that bring profits.—p. 42.
Ice cream pie.—p. 44.
* Putting style in salads.—p. 50.

HOTEL EMPLOYEE EDUCATION. Emphasizes the need of trained people either through training on the job or through trade preparatory work plus extension courses and lectures.

STYLING SALADS. Select materials carefully for quality, color and size, and mix lightly. Select the plate with regard to size and color harmony, place crisp lettuce cup on it carefully, and fill the cup with a measured amount of mixture. Garnish with artistry and use dressings as an accent rather than as a necessity.

Modern Hospital

Vol. 48, April, 1937

What to do about floors. J. Flikeid.—p. 83.
Dietitians in the diabetic clinic. A. E. Boller and A. Royston.—p. 94.
* Food served with finesse. E. Hayward.—p. 100.

Vol. 48, May, 1937

* Centralized dishwashing wins approval. V. H Ray.—p. 92.
A dietitian to the rescue. M. B. West.—p. 98.
* For better potatoes.—p. 102.
June breakfast and supper menus. A. Phillips.—p. 106.

SANITARIUM FOOD STANDARDS. Permanent employee personnel make it easier to please patients by providing a standard quality of food, according to Elizabeth Hayward of Las Encinas Sanitarium, Pasadena. A selective menu is essential in satisfying individual tastes. Meal hours are flexible. Food for patients is prepared in one kitchen and that for employees in a second kitchen. The cost of maintaining special food service

may be high but is repaid with satisfied patients.

CENTRAL DISHWASHING. Albany Hospital commends the central dishwashing room. Complete description of room and stainless steel equipment is given. Service is improved by the relegation of noise to an isolated section of the hospital and more sanitary care of trays and dishes, simplified checking of wastes, and room in serving units results. Decreased costs come from reductions in labor, operation of one machine in place of five, elimination of hand toweling of dishes and glasses, and hand polishing of silver, division of labor into unified jobs, and a reduction in quantities of supplies used.

BETTER POTATOES. Inferior potato products may be the result of refrigeration. Best cooking qualities are secured when potatoes are stored at uniform, moderate temperatures.

Personnel Journal

Vol. 15, April, 1937

* Neurological medicine in industry. F. Kennedy.—p. 360.
* The future of collective bargaining. C. S. Slocombe.—p. 368.

Hiring an advertising assistant. E. N. Hay.—p. 377.

NEUROLOGICAL MEDICINE. Physical health of employees is a recognized necessity. Their mental health requires equal attention. It has been found that 85–90% of all accidents are indirectly caused by an employee's mental condition.

COLLECTIVE BARGAINING. If labor unions become general in large-scale industry, collective bargaining will probably become the universal procedure for settling disputes even though at best it is clumsy and time-consuming.

Restaurant Management

Vol. 40, April, 1937

* Records mean profits in this department store restaurant. M. O. Cristoph.—p. 301.

Vol. 40, May, 1937

* Why work so hard?—p. 392.
* Salads.—p. 423.

RECORDS AND PROFITS. A routine of daily records enables a department store restaurant to operate at a profit. Chefs cook by recipe, portion sheets of each menu are filed, all meats are weighed and the yield calculated. Employees work on schedule with set duties.

EMPLOYEE MANAGEMENT. Ways of maintaining a contented staff include suggestion boxes, open forum discussions, educational classes, promotion within the ranks, and training for other jobs.

SALADS. Salad and salad dressing recipes for summer service.

NEWS NOTES

American Home Economics Association. The annual meeting was held on June 21–25 at the Municipal Auditorium, Kansas City. Preparations for the program were in charge of the executive secretary of the association, Mrs. Katharine McFarland Ansley. Dr. Carl C. Taylor, sociologist, U. S. Bureau of Agricultural Economics, addressed the meeting on "The Sociology of Family Life". Mrs. Kathryn Van Aken Burns, professor, University of Illinois, and president of the association, introduced Dr. Taylor.

At the Subject Matter Division Session on Food and Nutrition, May Reynolds presided. The following were speakers: Icie G. Macy, Research Laboratory, Children's Fund of Michigan, "The Application of the Science of Nutrition to Growth Problems"; and Inga M. K. Allison, Colorado State College, "Altitude Laboratory Studies".

Radio Broadcasts by Dietitians. Recent broadcasts were given by Mrs. Thompson of the Kentucky State Dietetic Association, Inez Somers of the New York State Dietetic Association, and Rosa Spearman of the Dallas Dietetic Association.

Mrs. Thompson discussed how she was able to apply the nutrition knowledge she received in her college home economics work in her own home. This talk was broadcast at the Kentucky State Dietetic Association meeting.

Miss Somers was a guest speaker for Dr. Shirley W. Wynne's "Laboratory of the Air", in which she discussed the fundamental principles upon which every housewife and mother can build up her family's sound health and nutrition. Miss Somers gave one of her interesting recipes for Two-In-One-Sandwiches.

According to *The Bulletin* of the Texas State Dietetic Association, Rosa Spearman was presented by the Parent-Teacher's Council on April 8, with "School Lunchrooms" as her subject.

New Positions for Dietitians. Among the new positions that are opening up for dietitians is that of food inspector for a large city. Jane Fletcher, graduate of the University of Iowa and the Latter-Day Saints Hospital training course, has obtained a position as food inspector in Salt Lake City. She inspects the restaurants and all places where food is on display. She has already made a great many improvements in eating conditions in the city.

Anna M. Tracy, Florida State College for Women, and chairman, Administration Section, American Dietetic Association, was a speaker at the Medical Association of the State of Alabama annual meeting held April 20–22. The subject of her paper was "The Dietitian".

"Health Education for Adults." Marjorie L. Foster, assistant adult health educator of the Food Clinic, Boston Dispensary, is the author of the above titled paper appearing in *Education* for May 1937. Miss Foster explains that the work of the Health Education Department of the Dispensary is one of instruction in food values and costs to both children and parents. "Informal talks, with visual aids on the subject of food values are given to members of the mothers' club which meets once a month." Under the general heading "An Adequate Diet at Minimum Cost," the instructor details what is necessary for an adequate diet and in what foods protein, fat, carbohydrate, calcium, iron and vitamins are abundant. Pictures explain the basis of an adequate diet, and wax models of foods are used during discussions. Servings of foods are based on the equivalent tables in Frances Stern's book *Applied Dietetics*.

League of Nations. The Health Committee held its twenty-fifth session from April 26–May 1. An Inter-Governmental Conference on Rural Hygiene for Eastern countries will be held in Bandoeng in August 1937, in conformity with the invita-

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And how can such desirable results be accomplished? By using Irradiated Pet Milk, it is possible easily to include in delicious food an extra amount of pure, safe, whole milk plus extra vitamin D. Because Pet Milk is double-rich, it can be diluted with less than an equal amount of another liquid—it can be used in place of cream—it will replace eggs and butter.

Irradiated Pet Milk, with its extra vitamin D, still costs less generally than ordinary milk—far less than cream.

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tion of the Netherlands Government. National reports drawn up by the public health services of the participating countries will cover various items, including health and medical service, and nutrition.

Since 1925 the health organization has been engaged in the study of nutrition in its relation to public health. The Health Committee in 1934 included in its three-year program the drafting of a general report on the problem of nutrition and assigned this work to Drs. W. R. Aykroyd and Etienne Burnet. The report, intended primarily for public health administrations, defines the rôle of nutrition in public health and preventive medicine. On the basis of this report, the Health Committee decided to set up a Technical Commission on Nutrition (1935) which commission will make a further study of the physiological bases of nutrition and the food requirements of human beings during their growth, from conception to adult age.

New York Diabetes Association. "Infection and Gangrene in the Lower Extremity in Diabetes Mellitus" was the topic of a meeting presided over by Beverly Chew Smith, M.D., at the New York Academy of Medicine on May 11. Reports from the four Surgical Divisions of Bellevue Hospital were presented by Gordon Lee, M.D., Laurence Miscall, M.D., Samuel Standard, M.D., Saul S. Samuels, M.D. The medical discussion was led by Herman O. Mosenthal, M.D., and the surgical by Carl G. Burdick, M.D.

Urban Study of Consumer Purchases. The U. S. Department of Labor has issued a preliminary report of data collected in Portland, Oregon. This is the second of a series on 32 cities surveyed in 1936 by the Bureau of Labor Statistics, and is entitled "Incomes Received and Rents Paid by Families in Portland, Oregon".

The American Documentation Institute has been incorporated on behalf of leading national scholarly, scientific and informational societies to develop and operate facilities that are expected to promote research and knowledge in various intellectual fields. A first objective of the new organization will be to develop and apply the new technique of microphotography to library, scholarly, scientific and other material. Such a national organization was foreseen as an outcome of Science Service's documentation activities when they were begun in July, 1935. Science Service's documentation activities will now be transferred to the new Institute.

Pratt Institute, Brooklyn, N. Y., held its Fiftieth Anniversary Dinner at the Waldorf-Astoria Hotel, New York City, on May 21. A further program was held on the following day at the Institute.

Mr. Frederic W. Howe, director of the School of Household Science and Arts, announces that commencing in September 1937, the School will offer two new one year courses, one in Costume Design and one in Dietetics, open only to college graduates and those of equivalent training. In the intensive course in dietetics, emphasis may be placed on either "the administrative or the scientific aspects of the work." For the dietetic course "a satisfactory personality rating, complete college credit and a related science background which should include at least one year in either a physical, chemical or biological science" is required.

Pulitzer Prize Awards, 1937. The prize for the "best example of a reporter's work during the year" was awarded in five equal parts to specialists in scientific news who gave daily accounts of the proceedings of the Harvard Tercentenary Conference. They are: Howard Blakeslee, Associated Press; John J. O'Neil, *New York Herald Tribune*; William L. Laurence, *New York Times*, Gobind Lal, Universal Service; and David Dietz, Scripps-Howard papers. Mr. Dietz, it will be recalled, was a dinner speaker at the Cleveland meeting of the American Dietetic Association.

Dr. Wilson G. Smillie, professor of public health administration at Harvard School

WHY STOKELY'S STRESS *Natural* FLAVOR

Natural, appetizing flavor has always been an important characteristic of Stokely's Baby Foods.

In the first place, only choice products, picked at perfection point and rushed to nearby kitchens, are used.

To retain garden-fresh flavor and food value in the highest degree possible, each product is "comminuted" instead of being mashed through sieves. This process preserves the *natural* flavor and color of the vegetable, supplies a smooth, uniform texture easily assimilated and digested, guards against appreciable loss of vitamins and mineral values.

This is the reason why Stokely's Baby Foods taste so fresh and delicious . . . why babies take them so eagerly. Mothers who feed Stokely's experience little difficulty in getting babies to eat second year foods . . . because Stokely's *natural* flavor is similar to that of regular family foods.

May we suggest you taste Stokely's yourself? Your own findings will prove how inviting and palatable these better prepared baby foods are. Stokely Bros. & Co., Inc., Indianapolis, Ind.

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BABY FOODS

Spinach • Peas • Carrots • Tomatoes
Green Beans • Applesauce • Apricots
Prunes • Vegetable Soup • Liver Soup
Beef Broth • Unstrained Vegetable Soup
Cereal

of Public Health, has been appointed professor of public health and preventive medicine and head of the department at Cornell University Medical College, New York. Dr. Smillie will represent Cornell in the supervision of the health center in Kipps Bay, Yorkville, New York City.

Seventh Harvey Society Lecture, of the current series at the New York Academy of Medicine, was delivered on April 12, by Dr. Cyril N. H. Long, professor of physiologic chemistry, Yale University School of Medicine, New Haven, Conn. His subject was "The Influence of the Pituitary and Adrenal Glands on Pancreatic Diabetes".

Institution Management. The May 1937 *Bulletin* of the Texas State Dietetic Association announces that the home economics department of the University of Texas is offering graduate courses for students desiring experience in institution administration. The junior residences allow room and board while the senior course offers a stipend of fifty dollars; both allow time for some graduate work in the university. Rosalie Godfrey, Littlefield Dormitory, Austin, Texas, is director of the course.

Gourmet Society of New York. A speaker at the recent meeting of the society, held at El Chico Restaurant, New York, was Dr. A. S. W. Rosenbach, famous bibliophile. In connection with his talk, Dr. Rosenbach exhibited "The Complete Housewife, or the Accomplished Gentlewoman's Companion" by Eliza Smith, said to be the first cook book published in this country, and "American Cookery, or the Art of Dressing Viands, Fish, Poultry, and Vegetables, by Amelia Simmons, 1796. Dr. Rosenbach also had a bill of fare from the Mermaid Tavern, England, dated September 14, 1588, and signed by the proprietor.

Information on Commercially Canned Foods. The American Can Company will send out on request abstract cards prepared from literature on the nutritional values of canned foods. The abstracts discuss the vitamin and food essentials content of commercially canned foods; in some cases the disease-preventing qualities of certain foods are briefly presented. On each card is listed the reference from which the material was obtained.

Summer Diarrhea in Babies. A quickly effective method of treating all types of diarrhea both in bottle-fed and breast-fed infants, announces Mead Johnson and Company, is the use of Casec (calcium caseinate) which is almost wholly a combination of protein and calcium. For the bottle-fed infant, the carbohydrate is temporarily omitted from the 24 hour formula and replaced with 8 level tablespoons of Casec. Within a day or two the diarrhea will usually be arrested, and carbohydrate in the form of dextri-maltose may safely be added to the formula and the Casec gradually eliminated. Three to six teaspoons of a thin paste of Casec and water, given before each nursing, is indicated for loose stools in breast-fed babies.

Riboflavin (Roche), synthetic vitamin B_2 is now being marketed by Hoffmann-LaRoche in tubes of 2 and 100 mg., also ampules of an 0.05 per cent solution. Barocca (Roche), synthetic vitamin B_1 will soon be available in 1 mg. ampules, each equivalent to 500 I. U. "Vitamin C and Tuberculosis" is the subject of a study by Dr. Charles K. Petter in the *Journal-Lancet* for May, 1937, in which the vitamin C administered was in the form of Cal-C-Malt containing chemically pure cevitamic acid, dibasic calcium phosphate and vitamins B_1 and B_2.

New Banana Literature. Ina S. Lindman announces that her new booklet, "Bananas Take a Bow", prepared for the individual consumer, contains 26 selected recipes and the latest information from the Fruit Dispatch Company, New York, about bananas. "Banana Specialties" is a new leaflet for cooking schools and demonstrations. A new set of large quantity recipe cards for use in institutions, restaurants, hotels and

DO YOU KNOW . . .

The Hot Whole Wheat Cereal Enriched with Extra Vitamin B

SINCE so many nutritionists prefer a hot whole wheat cereal, enriched with extra vitamin B—and since ease of preparation is so important in a diet regime—you'll be glad to know that Ralston, the hot cereal that cooks in 5 minutes, is

• **A WHOLE WHEAT CEREAL . . .** with only the coarsest bran removed . . . providing an abundance of the body-building, energy-producing elements that come from choice whole wheat.

• **DOUBLE-RICH IN VITAMIN B . . .** pure wheat germ is added to Ralston to make it 2½ times richer in vitamin B than natural whole wheat.

• **PALATABLE AND ECONOMICAL . . .** tastes so good that the whole family likes it—and each generous serving costs less than one cent.

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camps has been published. Old sets, published in 1935, can be replaced with the newly developed recipes.

Alabama Dietetic Association. The speakers on the program of the second annual meeting, April 22, were: Dr. James S. McLester, "Use of Protamine Insulin"; Dr. Edgar Givhan, Jr., "Dietary Management of Diabetics"; and Anna M. Tracy, "The Old and the New in Administration". The speaker at the banquet (Elizabeth Slater, presiding) was Dean Agnes Harris, University of Alabama. Fairfax Proudfit, chairman, Placement Bureau, spoke on "General Trends in Teaching Nutrition" at the morning session. Elizabeth Slater, Mary Blazek, Mrs. Ina Barbee Crane, and Ruby Gillis were presiding officers at the sessions.

Cleveland Dietetic Association. The following is a resume of the year's activities. At the November meeting Virginia Wing of the Anti-Tuberculosis League spoke on the tuberculosis work being done in Cleveland and Cuyahoga County. Other speakers at subsequent meetings were Mr. A. J. Hamilton, superintendent of City Hospital, "Organization of the Dietary Department"; Dr. E. E. Woldman, St. Luke's Hospital, "Treatment of Peptic Ulcers with Aluminum Hydroxide Drip"; Dr. E. E. Beard, City Hospital, "The Relation of Diet to Endocrine Disturbances".

The following officers were elected for the year 1937–1938: president, E. Perry, City Hospital; vice-president, H. McClellan, University Hospital; secretary, A. Walsh, City Hospital; and treasurer, Lois Crane, Cleveland Clinic.

Detroit Dietetic Association. The Diet Therapy Section has undertaken the task of proposing a standard method of dietary instruction and a set of figures for calculating diabetic diets that will meet with the approval of the physicians in Detroit. The committee feels that this is the opportune time for such a proposal since a group of physicians has recently formed the Detroit Diabetic Association.

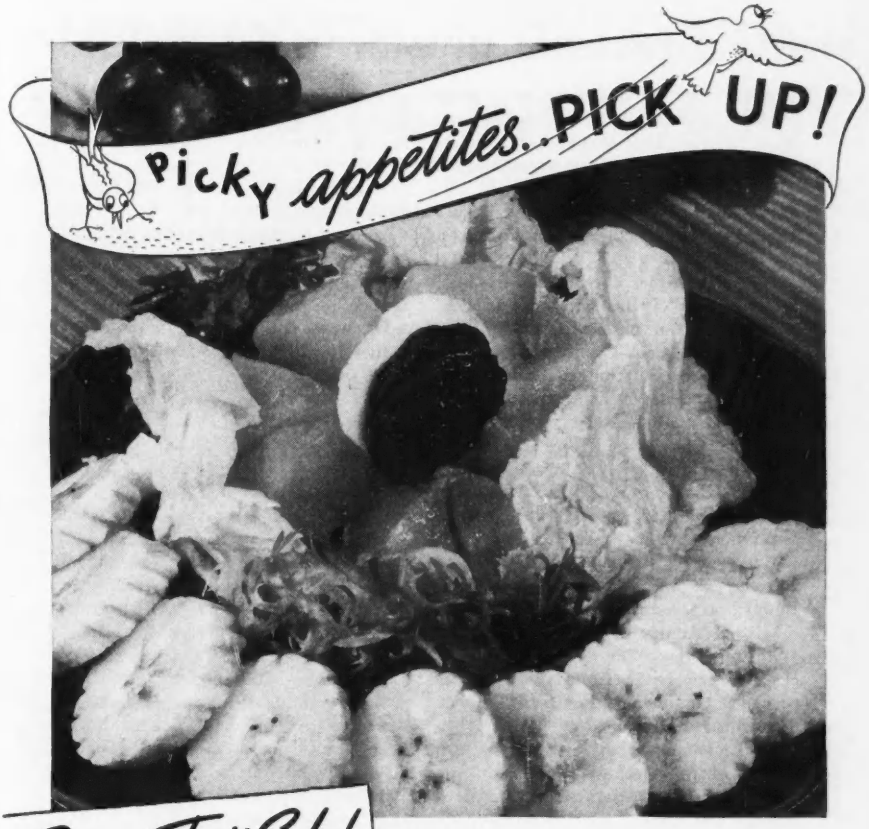
The association has continued its civic project in which funds were raised for the purchase of additional nutrition literature for the Detroit Public Library. A March party raised $225 for this fund, a large part of which represents a generous contribution from the Frederick Stearns Company. The Library Advisory Committee plans to use these funds to renew subscriptions of current periodicals on foods and nutrition, complete several back issues of *Nutrition Abstracts & Reviews*, and add a few new books to last year's contribution. Detroit physicians have shown considerable interest and plans are under way this year to use a portion of the funds to purchase nutrition literature for the Medical Library.

District of Columbia Dietetic Association met April 6 at Emergency Hospital, with the president, Eva Marks, presiding. Katherine Heitshu, president of the Virginia Dietetic Association gave an informal talk on her experiences as dietitian in the American Hospital, Paris. Miss Heitshu also told of the plans now being made by the members of the Virginia association for the convention in Richmond. Eleanor Enright then gave an account of her work with the Refinancing Project in Virginia. Miss Enright was an especially welcome visitor as she was formerly a most enthusiastic member of the local association. After the meeting the hostesses, Ann Jones Myers and Grace Jackson, served delicious refreshments from a beautifully appointed table.

Illinois Dietetic Association sponsored a joint meeting with the Wisconsin and Indiana associations in connection with the Tri-State Hospital Assembly at the Hotel Sherman, Chicago, May 5–7.

Lute Troutt, President of the American Dietetic Association, spoke on "The Dietary Department" at the Wednesday morning symposium on "The Administrative Organization of the Hospital."

Mary K. Sorensen, Illinois Central Hospital, presided at the dietitians' meeting Wednesday with the following program: Al B. Carder, manager of Carder's Res-



Banana Fruit Salad

● Bananas combine well with either fresh, canned or dried fruits in salads.

Cut through the edges of half a peach, pear or apricot so that it will fall open into petals when placed into a lettuce cup. Or arrange orange segments in flower form on lettuce. Fresh or canned fruit may be used. Garnish with dried fruit, berries or banana slices. Arrange a half circle of fluted banana slices in front of the lettuce cup. Serve with a cream or French dressing.

How to Flute Bananas: Peel bananas and draw prongs of fork lengthwise down banana to make parallel grooves. Then slice.

COLORFUL, delicately fragrant with enticing fruits... here's a salad that makes picky appetites pick up in a hurry!

And it's *good* for patients... the banana alone provides essential minerals, vitamins A, B, C and G, easily digested fruit sugars for real food-energy.

It's inexpensive, too, quick and easy to make—even the gay touch of fluted bananas only takes a jiffy. And for full rich flavor, just be sure to use a *fully* ripe banana (delicate brown "freckles" on the yellow peel).

Free **NEW BANANA RECIPE BOOK**

Fruit Dispatch Company, Home Economics Dept., Pier 3, North River, N. Y. C.

Please send me free: "Bananas Take a Bow," a 24-page illustrated booklet of delightful new banana recipes.

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taurant, "The Third Commodity"; Alden B. Mills, managing editor of *Modern Hospital*, "Present Day Personnel Problems"; Katherine Mitchell, Michael Reese Hospital, "Buying Versus Making Bread in the Hospital"; Mary Edna Golder, St. Anne's Hospital, "Manufacturing Ice Cream in the Hospital".

Beulah Hunzieker, Presbyterian Hospital, and president of the Illinois association, presided at the business meeting when Millie Kalsem, Cook County Hospital, was elected to represent the association in the House of Delegates of the American Dietetic Association. Miss Kalsem is a past president of the Chicago and Illinois associations.

At the dinner meeting at the Chicago Woman's Club on Wednesday, Miss Hunzieker presided. Members of the various associations gave brief talks. Gudrun Carlson, formerly U. S. Trade Commissioner to Norway, gave a talk on "The Highways and Byways of Scandinavia."

Zelia L. Kester, Indianapolis City Hospital, spoke on "The Dietitian" at the general assembly on Thursday at a symposium on "Maintaining Professional Service Standards in Hospitals".

At the joint meeting of nurses, medical social workers, women's auxiliary members, and dietitians, case presentations from Billings and Cook County Hospitals were discussed from the standpoint of the physician, nurse, social worker, and dietitian. Margaret Ahern and Lucille Bates presented the dietitian's viewpoint.

At the panel round table conference on Friday "Food Service" was discussed by Zelia L. Kester, Indianapolis City Hospital, Bernice Love, Methodist Hospital, Peoria, and Helen Miller, Waukesha Municipal Hospital, Wisconsin.

Iowa State Dietetic Association held the semi-annual meeting at Hotel Julien, Dubuque, April 27 and 28. Eunice Longworth, University Hospitals, presided. Following the morning business session, the members of the senior nutrition class at Clarke College entertained the group at luncheon in the College Tea Room. Frances Zuill, Department of Home Economics, University of Iowa, was guest speaker, having chosen for her topic "The Home Economics Curriculum as Basic Training for Dietitians".

At a joint afternoon session with the Iowa Hospital Association, Dr. Kate Daum, director of nutrition, University Hospitals, spoke on "Applications of Newer Developments in Nutrition, Food Production and Service to the Hospital Food Problem".

Dr. W. A. O'Brien, associate professor of pathology, University of Minnesota, was guest speaker at the evening banquet, his subject being "Preventive Medicine in a Modern Hospital".

Other papers presented during the sessions included: "Health Education, A World Movement", Dr. F. P. McNamara, Finley Hospital, Dubuque; "The Food Clinic, What is it?", Sarah Elkin, Michael Reese Hospital, Chicago; "Essentials of the Diabetic Diet", Dr. Wm. D. Paul, University Hospitals, Iowa City; and "Nutrition Adaptations in the Light of Racial Customs", Dorothy Lucke, Clarke College student.

Exhibits on "Racial Food Habits" and "Nutrition Problems in Relief under the Works Progress Administration", the latter shown by Veronica Murphy, Waterloo, proved very interesting.

Officers elected for the ensuing term were: president, Fern Gleiser, Iowa State College, Ames; vice-president, Dorothy Moore, Children's Hospital, Iowa City; secretary, Dorothy Anderson, Iowa Lutheran Hospital, Des Moines; treasurer, Hazel Swim, Currier Hall, Iowa City.

Louisiana State Dietetic Association held a meeting on March 22 at the home of Mrs. Dorothy P. Polack in New Orleans. Ann B. Eyl gave a report of a case in court relative to mislabeling of synthetic orange juice in which she, Helen E. Carmody and Mrs. Dorothy P. Polack served as witnesses for the Bureau of Pure Foods and Drugs. The group then discussed the advantages of establishing legal and military status for dietitians. Mr. Robert Polack, attorney, gave a talk on procedure to be followed in

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Diabetic diets can be lifted out of their monotonous rut with the aid of Knox Gelatine (U.S.P.). Forbidden foods are not missed so readily when a diabetic patient receives a varied diet containing tasty, pleasing, gelatinized salads and desserts.

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Send the coupon below to receive helpful, informative literature and more fine recipes such as given below.

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TOMATO JELLY WITH VEGETABLES (Six Servings)

	Grams	Prot.	Fat	Carb.	Cal.
½ cup hot water					
½ teasp. salt					
½ teasp. whole mixed spices					
1 env. Knox Sparkling Gelatine	7	6			
¼ cup cold water					
¾ cup tomatoes strained	150	2		6	
2 tablespoonfuls vinegar					
½ cup chopped cabbage	50	1		3	
½ cup chopped celery	60	1		2	
¼ cup canned green peas	40	1		4	
¼ cup cooked carrots cubed	40			4	
Total		11	....	19	120
One serving		2		3	20

Bring hot water, salt and spices to a boil. Pour cold water in bowl and sprinkle gelatine on top of water. Add to hot liquid and stir until dissolved. Strain into tomatoes and stir in vinegar. Chill until almost set, then add vegetables. Mold and chill until firm. Serve on lettuce with or without dressing.

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establishing legal status for dietitians as has been done by other professions.

The April meeting was held at the St. Charles Hotel. Dr. Golden, neuro-psychiatrist, spoke on "Some Aspects of Diet in Nervous Disorders".

Marjorie Roberts, chief dietitian at Marine Hospital, has been transferred to the Narcotic Farm, Lexington, Kentucky.

Susie Geiger of Salina, Kansas, is a new member, having recently joined the dietary staff at Charity Hospital.

Massachusetts Dietetic Association. The association has arranged a "Compilation of Therapeutic Diets" comprising records of the special diet practices of a number of hospitals and has assembled these for local use and further study. Later on it is hoped to have this material available for national distribution.

Michigan Dietetic Association met with the Michigan Hospital Association and the Michigan Chapter of the Association of Record Librarians of North America for their twenty-second annual meeting at the University Hospital, Ann Arbor, April 15 and 16.

At the Michigan Hospital Association's joint session on April 15, Frances MacKinnon, dietitian, University Hospital, spoke on "The Diet Clinic in the Hospital".

Dr. Walter G. Maddock, University of Michigan Hospital, addressed the joint meeting of the Michigan Dietetic Association on "What the Surgeon Expects of the Dietitian". At the afternoon session, the following were speakers: Ruth Atwater, dietitian, American Canners' Association, Washington, D. C., "Standards and Labeling of Canned Goods"; Mary Harrington, director of dietetics, Harper Hospital, Detroit, "Objectives of a Professional Organization"; Dr. Irma Gross, professor of institution management, Michigan State College, Lansing, "Backgrounds and Horizons in Home Economics"; and Mrs. Mary Rockwood Waller, house director, University of Michigan Hospital, "Keeping House for 825 Patients".

Missouri Dietetic Association. In the delightfully original "Missouri Mutterings" this state association announced its fourth annual meeting at the Hotel Baltimore, Kansas City, May 14 and 15. Humor, art, color and music, all served to remind the members to attend the following well balanced program: Dr. Morris B. Simpson, president, Jackson County Medical Society, "Greetings"; Gordon B. Kock, industrial engineer, "The Electric Kitchen"; Dr. E. Lee Hoffman, "Urinary Stone Formations as Influenced by Diet"; Dr. Orval R. Withers, "Allergy"; and Mary A. Foley, Mayo Clinic, "The Dietitian as an Educator". At the banquet, the president-elect of the national Association, Lenna F. Cooper, spoke on "The Human Side of Our Work."

At the May 15 session the following were speakers: Dr. Bertha Bisbey, University of Missouri, "Recent Trends in Nutrition"; Myron Green, Myron Green Cafeterias; and Professor W. H. E. Reid, University of Missouri, "The Relation of Temperature to the Eating Qualities or Palatability of Ice Creams".

Marjorie Euwer has accepted a position as head dietitian at Pennsylvania University Hospitals.

Isabella McMenamy, formerly dietitian at De Paul Hospital, is now dietitian at St. Louis City Sanitarium.

Marjorie Stevenson has recovered from her recent illness and is back on duty at the City Hospital, St. Louis.

Louise Wilkonson, head dietitian at Barnes Hospital, is now enjoying her vacation at her home in Oklahoma.

Hilda Hartman has accepted the position of dietitian at De Paul Hospital, St. Louis.

Mabel Scott, Jewish Hospital, St. Louis, will fill out the term as secretary of the Missouri Dietetic Association.

The St. Louis Dietetic Association held a dinner meeting on May 3 at the Y.W.C.A. where a coöperative lunchroom is now in progress. Mrs. Marie Harrington, in charge of the meeting, showed moving pictures relating to health work.

AN EVENING SUGGESTION FOR RESTLESS PATIENTS . . .

DIETITIANS in hospitals and other institutions will be interested in this summary of a sleep-experiment reported previously in the Journal of the American Dietetic Association:

"Our 16 subjects slept best (with fewest movements) when a light meal of the familiar ready-to-eat cereals was taken before going to bed, and their sleep was disturbed more than normal for the subjects when a meal of hard-to-digest foods was the last meal before retiring.*"

Kellogg's Corn Flakes are the world's most popular ready-to-eat cereal. They are easy to digest and help promote restful slumber. Individual packages for each tray save waste. If not used, they may be returned to the pantry. Serve Kellogg's Corn Flakes as a before-bed snack, wherever advisable. Note the improvement.

*"Experimenting with Foods and Sleep," Journal of the American Dietetic Association, July, 1934.

(In writing advertisers, please mention the journal.)

Greater New York Dietetic Association held the regular monthly meeting on April 28 at the American Red Cross Building, New York City. Adelia Beuwkes, chairman of the Community Education Section, planned the meeting at which Demetri Taylor of *McCall's* and Helen Hamilton of General Foods were the speakers of the evening. Sue Sadow, Emergency Home Relief Bureau, gave a short talk on "Low Cost Special Diets". Members of this association were hostesses at a tea given to the New York State Dietetic Association convention delegates on May 21 at the Hotel Astor, New York.

New York State Dietetic Association held its eighth annual convention at the Hotel Astor, New York City, May 20–23.

Genevieve Moyer, Albany Hospital, presided at the Diet Therapy Section meeting at which the speakers were: Walter H. Eddy, Ph.D., professor of physiological chemistry and director of Vitamin Research Laboratory, Columbia University, "Recent Trends in Vitamin Study"; and Thomas T. Mackie, M.D., attending physician, Roosevelt Hospital, research associate, Cornell University Medical College, "Allergy in Ulcerative Colitis". At the welcoming luncheon Pearl V. Metzelthin, dietitian, American Air Lines, spoke on "Dietetics Up in the Air".

At the Professional Education Section meeting, during which Henderika Rynbergen, New York Hospital, presided, the following subjects were discussed: "Scientific Aspects of Dietetics" by Charles Gordon Heyd, M.D., president, American Medical Association; "Securing Adequate Dietitians for Public Institutions; Problems and Recent Attempts to Solve Them", by Istar A. Haupt, Ph.D., associate examiner, New York Department of Civil Service; "The Place of Nutrition in the Nursing Curriculum" by Anna D. Wolf, R.N., director of both the School of Nursing and the Nursing Service, New York Hospital.

Claudia Clanston, author and traveler, chose "I've Been Around" as the subject of her talk at the banquet, at which Emma L. Feeney, state president, presided.

The Administration Section met on May 21, with Elizabeth Cole, Montefiore Hospital, New York, presiding. Greetings from the American Hospital Association were presented by C. W. Munger, M.D., president, American Hospital Association. The following subjects were then discussed: "Electricity in the Institution", by Paul A. Hunker, manager, commercial department, Rex Cole, Inc.; "Low Cost—Profitable Menus", by Mrs. N. S. MacIntosh, supervisor, Savarins, Inc.; "Food Fashions", by Mrs. Gertrude Nuckols, cafeteria manager, Franklin Simon Co.; "Food Travels—What the Public Is Demanding" by Mrs. Elizabeth Reynolds, owner of Elizabeth D. Reynolds, Inc.

Mr. Boris Fingerhood, superintendent, Israel Zion Hospital, Brooklyn, N. Y., and representative of the New York State Hospital Association spoke on "The Dietitian—The Hospital—The Administrator" at the luncheon on May 21, at which Mrs. Mary P. Huddleson, editor of the JOURNAL, presided.

Mame Porter presided at the Community Education Section meeting with the following speakers: Karl M. Bowman, M.D., director, Division of Psychiatry, Department of Hospitals, Bellevue Hospital, New York, "Securing Coöperation of Patients"; W. H. Sebrell, M.D., past assistant surgeon, U. S. Public Health Service, "The Nutritionist and the Health of the Community"; and Pauline Murrah, nutrition consultant, "A Nutritionist Works with a City Department of Health".

Officers of the association for 1936–37 were: president, Emma Feeney, Pratt Institute, Brooklyn; vice-president and publicity chairman, Minna G. Roese, Emergency Relief Bureau, Buffalo; secretary and chairman of the Membership Committee, Grace M. Schenck, Buffalo City Hospital; treasurer and constitution chairman, Esther Rhodes, Rochester General Hospital; historian, Ellen B. Guensey, Strong Memorial Hospital, Rochester; and chairman

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New **SUGAR-FREE ICE CREAM**

Make delicious sugar-free ice cream in your own kitchen in a few minutes with Cellu "Freezette," sugar-free powder mix. One can makes 15 pints. Less fattening than ordinary ice cream. Also good in diabetic diets. Chocolate and Vanilla flavors. Samples on request.

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A new book chock-full of tested and tried methods, schedules, formulas and directions for housekeeping in hospitals, hotels, clubs and institutions. A few of the subjects covered are:—daily care of guest rooms; how to remove stains from carpets; furniture finishing, retouching and polishing; linens, what to buy and why; insect control; working manual for the housekeeping department; and hundreds of other practical suggestions that can be put to use by the housekeeper every day. Written in concise, understandable language from the actual experiences of successful Executive Housekeepers.

A handy reference book, 96 pages, 9 x 12 inches, completely indexed and bound in an attractive stiff cover. Price $1.00, postpaid. Write for detailed outline of contents.

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of nominating committee, Marcia Rosbrook, Syracuse Memorial Hospital, Syracuse.

North Carolina State Dietetic Association met in Raleigh, N. C. in conjunction with the Hospital Associations of the Carolinas and Virginia April 22–24, with the president, Margaret Fitzhugh, Watts Hospital, Durham, presiding.

At the Thursday morning session, reports of the section activities were given. The association was happy to have the national President, Lute Troutt, speak on "Activities of the American Dietetic Association". Thursday afternoon, George H. Reese, M.D., Petersburg Hospital, spoke on "Your Choice and the Public"; Miss Troutt, "The Present Status of Dietetics as a Profession"; O. K. Fike, Grace Hospital, Richmond, "The Dietitian a Master Salesman"; Dr. Mary de Garmo Bryan, "The Importance of a Well Equipped Dietary Department To Any Hospital"; Katherine O. Altman, Conway Hospital, South Carolina, "Changing Personnel and a Satisfied Hospital Family"; Katherine Heitshu, "Special Diets"; Mrs. H. W. Carroll, "A Successful Auxiliary and How it Will Help Your Hospital".

On Thursday evening a banquet was held at Sir Walter Raleigh Hotel. The guest speaker of the evening was Governor Clyde Huey of North Carolina.

Friday morning, Celia P. Swecker, Rex Hospital, Raleigh, chairman of the Program Committee, presided with the following program: Aileen Brown, Medical College of Virginia, "Essential Qualifications for Student Dietitians"; Margaret Edwards, Womans College of the University of North Carolina, "Plans for Annual Meeting in October"; Ruth Atwater, National Canners Association, "The Value of Research in the Canning Industry to the Consumer". The discussion on "Cafeteria Problems" was led by Dr. Mary de Garmo Bryan. Warrent T. Vaughan, M.D., gave an illustrated lecture on "Dietary Problems in the Treatment of Food Allergy". A motion picture, "The Method of Feeding Children in the Indiana University Hospital," was presented by Lute Troutt.

Friday evening a dinner meeting was held at Sir Walter Raleigh Hotel with Margaret Baker, City Memorial Hospital, as toastmistress, and Celia Swecker and Lillian Allen, Rex Hospital, Raleigh, as hostesses.

The following officers were elected: president, Margaret Baker, City Memorial Hospital, Winston-Salem; vice-president, Celia Swecker, Rex Hospital, Raleigh; secretary, Tiphaine Burgess, Watts Hospital, Durham; treasurer, Jane Hereford, Duke Hospital, Durham.

The executive meeting was held in Durham in May, with Margaret Fitzhugh, president, presiding. Margaret Baker, the incoming president, appointed Division Chairmen: Administration, Blanche Tansil, Womans College, U. N. C., Greensboro; Diet Therapy, Elsie Martin, Duke Hospital, Durham; Professional Education, Elizabeth Meinung, Salem College, Winston-Salem; Community Education, Margaret Fitzhugh, Watts Hospital, Durham. Chairmen of standing committees: Program, Ada Field; Nominating, Camille Alexandria; Revision, Eugenia Eley; Legislation, Cora Gray; Scientific Education Exhibit, Catherine Cull. Margaret Fitzhugh was elected to the House of Delegates. Celia Swecker, chairman, Hospitality Committee for the national meeting, appointed Margaret Baker and Elsie Martin representatives from North Carolina on the committee.

Northwest Dietetic Convention. Dietitians from the states of Idaho, Montana, Oregon and Washington, and British Columbia, gathered in Seattle for a convention April 2–4.

The meeting, the first of its kind to be held in the Northwest, was the happy thought of Mary Northrop, president of the Washington State Branch of the A.D.A. To her and her committees are due the thanks of those attending.

The time of the meeting coincided with that of the convention of the American College of Surgeons held in Seattle so that dietitians might have the privilege of attending sessions in both conventions.

The opening meeting was a luncheon at the Women's University Club. The speaker

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was Dr. Malcolm T. McEachern who discussed what the institution expects of the dietitian.

The general sessions covered the fields of professional education, diet therapy, institution administration, and community education. Elizabeth Baldwin, nutritionist, Multnomah County Relief Committee, Portland, Oregon, and her committee planned a program full of interest.

Numerous trips to supply houses, hospitals, the new residence halls at the University of Washington, and school lunchrooms were arranged by Dorothy Goodrich and her committee.

Luncheons, dinners and a theatre party planned by Helen Kantner of the Swedish Hospital, Seattle, and her committee gave the convention a pleasant aspect particularly for those who were combining a vacation with the meeting.

Nearly 100 registered for this first meeting of the Northwest Dietitians and plans were made to make it an annual affair with the 1938 meeting in Oregon, according to Ruth Walker, chairman of publicity for the Washington State branch of the A.D.A.

Ohio State Dietetic Association met at the Deshler-Wallick hotel, Columbus, Ohio, April 13–14. Following the welcoming address by the president, Rachel Reed, of the Ohio Dairy Council, Dr. Cecil Striker of the Jewish Hospital Staff spoke on the "Newer Concepts of Diabetes". Dr. W. E. Kraus, Ohio Agricultural Experiment Station, Wooster, completed the morning session with his discussion on "New Developments in the Field of Vitamin D milk". Inistore Simms, program chairman, presided at the welcoming luncheon and introduced Lute Troutt, President of the American Dietetic Association, who spoke on the "Activities of the A.D.A."

The afternoon program consisted of a joint meeting with the Ohio Hospital Association conducted by A. D. Hardgrove, assistant secretary, The American Hospital Association, on "Dietetic Problems" (minimum hours and economic trends were among the problems discussed). Dr. F. A. Hitchesch, assistant professor of physiology, Ohio State University, spoke on "Some Dietary Factors in Disease". Dr. Martha Koehne, nutritionist with Ohio State Department of Welfare, Columbus, concluded the program of the afternoon with a discussion of the work now being developed in that department.

The Cincinnati Dietetic Association acted as hostesses at a tea on April 13. At the annual banquet, Dr. Ralph S. Fanning, Department of Fine Arts, Ohio State University, talked on his "Travels with a Sketch Pad."

At the business meeting the following officers were elected: president, Eva Ylvisaker, Children's Hospital, Cincinnati; vice-president, Wilma Robinson, Christ Hospital, Cincinnati; secretary, Bessie Wallace, Mount Sinai Hospital, Cleveland; and treasurer, Olive Walker, University Hospitals, Cleveland.

Section chairmen as follows reported on the various projects studied during the year: Hazel Fullride, Administration Section; Madeline Tobias, Diet Therapy; Mrs. LaGanke Harris, Community Education; Catherine Koch, Professional Education. Mary Louise Bone, chairman of Membership Committee, reported twelve new members. The Publicity Committee, Caroline Moorman, chairman, presented a survey of all professional articles appearing in newspapers and periodicals in all the larger cities of Ohio during the year.

Dr. Richard Finley, clinical instructor, Western Reserve University, presented a paper on the "Psychology of the Patient". Dr. B. K. Wiseman, assistant professor of medicine, Ohio State University, closed the meeting with a lecture on "Diagnosis and Treatment of Anemias".

The meeting was one of the most enthusiastic and best attended ever held in the state.

Pennsylvania State Dietetic Association. The fifth annual meeting was held at the Hotel Bethlehem on May 12–14, 1937.

The discussions on May 13 were as follows: "Cocktails for Two", F. O. Zillessen, M.D., pathologist, Easton Hospital, Easton; "Psychiatric Thoughts About Eating",

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H. F. Hoffman, M.D., psychiatrist, assistant superintendent and clinical director, Allentown State Hospital; "Sociology Welcomes Dietetics", Charles H. Rominger, Ph.D., professor, Cedar Crest College, Allentown; "Status of the Dietitian in the Community", W. W. Butts, superintendent, St. Luke's Hospital, Bethlehem; "Current Events", Hon. James F. Henninger, judge of Lehigh County Court, Allentown; "Value of Pennsylvania German", Irene Welty, recreation director, Allentown; and "Portrayal of Pennsylvania German Folk Lore", William S. Troxell, columnist, *Allentown Morning Call*.

Students of the Pennsylvania State College and members of the Pennsylvania Hospital Dietitians Society met at a group breakfast on May 14. Florence Peters presided at the General Session at which greetings were extended by Sarah Tyson Rorer. Grace Rupert, Hackett Medical College, Canton, China, spoke on "Chinese Food and Diet" and Virginia Howard Ray, chief dietitian, Albany Hospital, on "Central Service". Lila Hainer presided at the afternoon meeting of the general session at which the following were speakers: Esther Engle, professor of chemistry, Cedar Crest College, Allentown, "Chemistry of Cosmetics"; and Charlotte L. Eaton, associate editor, *The American Home*, "Modern Trends in Decoration".

At the dinner, at which Mary Lucille Green presided, Albert G. Rau, dean, Moravian College and Theological Seminary, Bethlehem, spoke on "Local Moravian History".

Officers of the association are: president, Elizabeth Miller, chief dietitian, Philadelphia General Hospital; president-elect, Rena S. Eckman, chief dietitian, Montefiore Hospital, Pittsburgh; secretary, Katherine Louser, chief dietitian, State Hospital, Norristown; and treasurer, Minerva Harbage, chief dietitian, Jewish Hospital, Philadelphia.

Philadelphia Dietetic Association, formerly known as "The Dietitians' Association of Philadelphia," elected the following officers for the coming year: president, Henriette Pribnow; vice-president, Katherine Louser; secretary, Lila G. Hainer; treasurer, Lucille M. Refshauge; member of the executive committee for 1937–1940, Evelyn Carpenter.

Neva Betz, formerly of Baby's Hospital, has taken a position with the H. J. Heintz Company of Pittsburgh.

Ruth Boyd, dietitian with Shrafft's restaurant in Philadelphia, has been transferred to a similar position in New York.

Marjorie Euwer, of St. Louis, is now chief dietitian at University Hospital.

Texas State Dietetic Association. At the third annual convention held in Dallas on April 2–3 the following officers were elected: president, Selma Streit, Scottish Rite Dormitory, Austin; vice-president, Mamie Ruth Harris, Hermann Hospital, Houston; secretary, Mert McCollum, Rushing Clinic, Dallas; treasurer, Antonette Bracher, Junior League Luncheon Club, Houston; Administration Section, Nell Wickliffe, Station Hospital, Fort Sam Houston; Diet Therapy Section, Rose Richter, Methodist Hospital, Dallas; Community Education Section, Juliette S. Hamilton, Mary Hardin-Baylor College, Belton; Professional Education Section, Roselie Godfrey, Littlefield Dormitory, Austin.

Mary E. Smith, Memorial Hospital, Houston, was elected to serve as a member of the House of Delegates at the national meeting this fall. The Galveston dietitians took advantage of their location on the Gulf of Mexico to entertain the South Texas group with a novel beach party on May 21. Catherine Graybill Juneman erected a private cabana on the beach where the group gathered for a swim, beach games and a box supper. This has become an annual occasion and from year to year the South Texas Dietetic Association look forward to their meeting in Galveston during the oleander season. Hostesses other than Catherine Juneman were Clara Matthews, Helen Seago and Carolyn Cason.

Ruth Butler has resigned as dietitian of Lubbock Sanitarium to accept a position as dietitian at Illinois Central Railroad Hospital, Paducah, Ky.

Inez Crawford, assistant dietitian, Methodist Hospital, Houston, is attending summer

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school at T.S.C.W., Denton. Louise Delery, Houston, is temporary assistant.

Catherine Kelker, after resigning as dietitian of St. Joseph's Infirmary, Houston, is spending the summer with her family in Indiana. She will resume her work as dietitian this fall in Meadowbrook Hospital, New York.

Carolyn Cason, University Hall, Galveston, is working under Dr. Mary de Garmo Bryan in Columbia University this summer.

Tony Bracher is acting dietitian at Camp Nakanawa, Mayland, Tenn. She will return to Houston to reopen the Junior League Luncheon Club in October.

New members of the A.D.A. are: Johnnie McCrery, Texas Technological, Lubbock, and Carolyn Cason, University Hall, Galveston. New members of the Texas association are: Mrs. Doris C. Robinson, Bay City, and Carolyn Cason, University Hall, Galveston.

Washington State Dietetic Association held a business meeting April 2, 1937 at which the following officers were elected: president, Mary W. Northrop, King County Hospital, Seattle; president-elect, Jennie I. Rowntree, University of Washington, Seattle; vice-president, Eleanor Gerst, Laurelhurst Beach Sanitarium, Seattle; secretary, Clara Belle Tavis, M. S. Marine Hospital, Seattle; treasurer, Betty M. Harris, Everett General Hospital, Everett.

Wisconsin State Dietetic Association. Officers for 1937–38 are: president-elect, Theresa Goetz; secretary, Dorothy Hathaway, Milwaukee County Hospital; treasurer, Mercedes Cranston. The president is Nell Clausen. At the close of the recent state meeting the following were made honorary members of the association: Sister M. Jovita, Mary Van Hecke, Mallita Fisher Jensen and Annette Snapper.

New members in the association are: Sister Mary Agnes Dickoff, St. Agnes Hospital, Fond du Lac; Marguerite Anacker, Milwaukee Hospital; Lily Amundson, Madison Vocational School; Helen Livingston, Wisconsin General Hospital, Madison; Jean Usher, Wisconsin General Hospital; Rachel Ruffner, Y. W. C. A., Milwaukee; Clara Palan, St. Mary's Hospital, Wausau; Leonora Weber, Bellin Memorial Hospital, Green Bay; Dorothy Belknap, Wauwatosa; Frances Tipple, Wisconsin Industrial Home for Women, Taycheedah; Elizabeth Paine, Milwaukee; and Sadie Stolen, Columbia Hospital, Milwaukee.

Marylin Moore, Wisconsin General Hospital, Madison, was recently married to Hugh Autrey and is living in Fresno, California. Her position was filled by Jean Usher, who completed her student dietitian course at Harper Hospital, Detroit.

Sister M. Jovita, St. Joseph's Hospital, Milwaukee, is recuperating from a severe illness in Denver.

Doris Johnson, St. Joseph's Hospital, Milwaukee, is assistant in the Home Economics Department, University of Wisconsin.

Helen Du Chene, Milwaukee County Hospital, and Berniece Overton, who completed her student dietitian course at St. Mary's Hospital, Rochester, are now at St. Joseph's Hospital.

Grace Clark, home economics teacher in Washington High School, Milwaukee, is on the staff of the Milwaukee County Hospital.

Kathryn Habbeggar was married recently to Harold Porter and is living at Waupaca, Wisconsin. Her position at Columbia Hospital, Milwaukee, was taken by Sadie Stolen who completed her student dietitian course at Pennsylvania Hospital.

Eunice M. Dvorak, who completed her student course at the University of Minnesota Hospital, is now at St. Luke's Hospital, Milwaukee.

Dorothy Conley, Milwaukee Children's Hospital, is now dietitian at Evanston Hospital, Evanston, Illinois.

Thelma Denniston, Wisconsin General Hospital, has accepted a position at New York Hospital, New York City.

Mary A. Bergin has joined the staff of the Holy Family Hospital, Manitowoc, Wisconsin.

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Parlor, bedroom and bath	8.00	

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WHO'S WHO IN THIS ISSUE

Mary de Garmo Bryan, Ph.D., head of the Department of Institution Management, Teachers College, Columbia University, New York City, has been in the forefront of dietetic progress ever since the days of her service as an Army dietitian in France. Her associates have honored Mrs. Bryan in many ways: she is a past president of the American Dietetic Association, a member of its Journal Board, and a former chairman of the Professional Education Section and inspector of approved courses for student dietitians. Ever alert to detect the weak link in the chain of concerted action, Mrs. Bryan has directed thought toward an overlooked field of activity for the dietitian in her book *The School Cafeteria* and in her paper appearing in this issue.

Vilhjalmur Stefansson, famed Arctic explorer, is a graduate of the State University of Iowa and received his LL.D. degree at the University of Michigan in 1921; the A.M. degree, Harvard 1923; and Ph.D., University of Iceland 1930. He was a member of an archaeological expedition to Iceland under the auspices of the Peabody Museum of Harvard University in 1905, also of the ethnological expedition to the Eskimos of Mackenzie delta under the auspices of Harvard and Toronto University in 1906. In 1908 he returned again for 53 months study under the auspices of the American Museum of National History, New York City, and the Government of Canada. From then until 1918 he visited Colville delta, Cape Parry, Coronation Gulf and Victoria Island and the Canadian and Alaskan sectors of the Arctic region. Dr. Stefansson has contributed extensively to popular and scientific magazines and technical publications.

E. H. L. Corwin has been an executive officer of the New York Academy of Medicine's division on public health for over 25 years. In this capacity he organized the Associated Outpatient Clinics, the Bureau of Information and Service, and the Convalescence Bureau of the United Hospital Fund of New York (as director). He was the first secretary-treasurer of the International Hospital Association, of which he is now honorary president. Dr. Corwin is the author of many publications concerned with socio-medical problems, as well as two published books: *Social Insurance in Belgium* and *The Political History of Poland.*

Quindara Oliver Dodge is associate professor of institution management, and director of vocational practice, Simmons College, as well as director, Vocational Training Department, Women's Educational and Industrial Union, Boston. Mrs. Dodge, on her accession to the office of president of the American Dietetic Association, was noted editorially in this Journal for November, 1933.

Ruth M. Leverton was awarded the Yardley Foundation Fellowship given by the New Jersey Federation of Women's Clubs for 1936–37. She holds the M.S. degree from the University of Arizona and received the Ph.D. degree in nutrition chemistry from the University of Chicago in 1937. A graduate of the University of Nebraska, she is returning there as a member of the Experiment Station and Home Economics staff this coming year.